EARLY WORK EXIT PATTERNS OF OLDER MEN: THE INFLUENCE OF THE WORK SPHERE

BY

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This dissertation is dedicated to
the memory of my mother,
Byungran Park
(1925-1995)

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EARLY WORK EXIT PATTERNS OF OLDER MEN: THE INFLUENCE OF THE WORK SPHERE

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Chairman: John C. Henretta
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This study identifies and examines the early work exit behaviors that have occurred in great number during the last two decades, focusing on the influence of labor markets and occupational structures. Although previous research primarily examined the impacts of pecuniary variables and individual characteristics variables on early retirement, this research approaches early work exit behaviors with a labor market perspective which emphasizes actors in labor markets, firms, labor unions, and governments. This study argues that increasing diversity in early withdrawal patterns is driven by an evolution of labor markets and an occupational structure which is dependent on labor market conditions. The study estimates effects of occupational characteristics and labor market conditions on early work exit patterns.

Using the National Longitudinal Survey of Older Men, 2784 of older workers, who turned age 55 after the survey began, are followed from age 55 through age 61. In six years of observation, five types of work exit patterns are identified: still working at age 55 job, exit and reenter (job change), out of the labor force to in the labor force, sporadic work, and retired. Here, a job change is defined by an occupational movement, using three digit occupation codes, and so a job change in this study does not necessarily mean an employer change.

Results of the study show the complex work exit behaviors of the elderly are very different from the traditional one-step retirement from a life time job to permanent exit and indicate that the massive early work exit is strongly driven by firms, labor unions, and governments as well as older workers themselves. Thus, these results suggest that a work domain is an important aspect in explaining early retirement. The final chapter discusses implications of these results for life course perspective and sociology of age.

CHAPTER 1
INTRODUCTION

Background

The study of early work exit patterns has been an emerging research issue because social gerontological investigation of labor force activity in old age has shown a trend toward a lower rate of labor force participation and early departure from career employment before age 62. The dramatic increase in early retirees has transformed the traditional conception of retirement into a variable conception and has reorganized the end of the life course.

The tendency toward a decline in the elderly labor force participation rate has evolved during the 20th century. The long-term trend toward low participation has been accelerated by the development of public and private pension systems. Graebner (1980), in his classic work on retirement history, related the low participation of old workers in the labor force to the development of retirement institutions in corporate America. Graebner indicated that the creation of retirement systems in the private sector of industry has consistently reduced labor force participation of the elderly. Also, the retirement age has declined since 1950.

Gendell and Siegel (1992), in their recent empirical study, showed that the median age of American men at retirement has fallen by four to five years since mid-century. The pace of decline in retirement age decelerated considerably beginning in the 1970s, and 80 percent of the decline occurred by the early 1970s. The labor force participation rate declined monotonicaly at every age between 1950 and 1990. For the age group 55-59, the rate dropped over 10 percent (from 89.9 percent to 79.8 percent) between 1950 and 1990.

Ransom and Sutch (1986, 1989), in their historical study of elderly labor force activity, reported that although their estimate of the labor force participation rate between 1900 and 1930 is flat, labor force participation of the elderly since 1930 has declined. This gradual decline is convincingly due to the development of the public pension system. Ransom and Sutch argued that there was a high frequency of on-the-job retirement in the industrial labor market from 1870 to 1937. Industrial jobs are very strenuous and dangerous. A large number of older workers moved from highly demanding jobs to less demanding occupations. Thus, many workers who were unwilling to retire found an alternative. This account suggests that the situation of exiting from the career job and returning to a

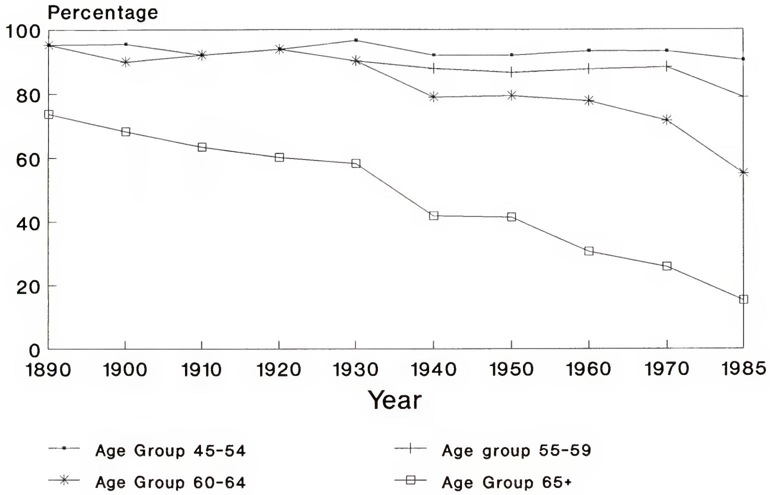

FIGURE 1.1 LONG-TERM LABOR FORCE PARTICIPATION TREND
Note: This is reconstructed from Jacobs, Kohli, and Rein (1991).

bridge job at one's career end may have existed for a long time (Achenbaum and Morrison 1993).

The long-term evolution of the labor force participation rate by age groups in the United States is shown in Figure 1.1. It shows that since the 1930s retirement among men has become widespread and increasingly has occurred before age 65. The labor force participation rate of men in 65+ age group dropped by 53.2 percent (from 68.4 percent in 1900 to 15.2 percent in 1985) and age group 55-59 by 11.1 percent (from 90 percent to 78.0 percent). The pace of decline for age group 55-59 accelerated somewhat in the 1970s. During this period, the labor participation rate for age group 45-54 was flat with small fluctuations, but the rate for age group 60-64 abruptly dropped between 1930 and 1940 and has continued to decline since then. Thus, the long-term trend in labor participation rates during this century reveals a remarkable decline in labor force activity.

The short-term trends in the labor force participation rates before age 65 in the last two decades also should be examined. Short-term labor force participation trends are shown by two age groups in Figure 1.2. The figure shows the declining rate of labor force participation in that period. The participation rate for these two age groups continued to decline between 1965 and 1985. It is noteworthy that beginning in the 1970s the labor force participation rate

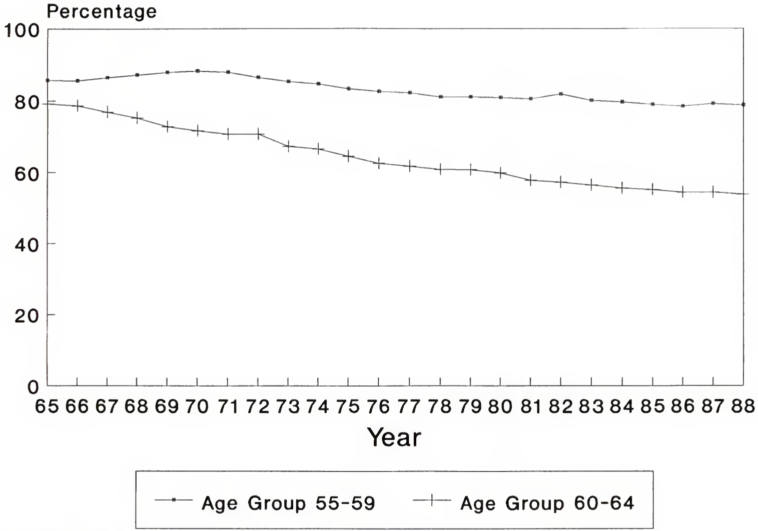

FIGURE 1.2 SHORT-TERM LABOR FORCE PARTICIPATION TREND
Note: This is reconstructed from Jacobs, Kohli, and Rein (1991).

has dropped sharply. This change is possibly related to economic changes and pension rule revisions. Whatever factors are contributing to the trend, many workers have been leaving the work force at increasingly earlier ages.

The trend toward a low labor force participation rate, combined with a longer life expectancy and a low mortality rate, has led gerontologists to pay attention to work exit patterns in old age. Declining participation has reshaped the traditional life course of men so tremendously that scholarly interest has begun to grow remarkably. Many studies show the dramatic transformation of late labor force activity. For example, Jacobs, Kohli, and Rein (1991) argue that massive early exit has become a universal phenomenon among western countries during the past two decades (also see Guillemard and Rein 1993). Previous studies also have suggested the need for specific examination of employment patterns between ages 55 and 62 (Ruhm 1989)--that is, in the period before social security eligibility--because so many men now exit at those ages.

As the foregoing paragraphs describe, the long-term trend toward the low rate of employment activity and the short-term trend toward early exit raise an emergent question of the late career patterns that men follow. The traditional meaning of retirement is unlikely to be true of very early retirees. As will be discussed later, some scholars argue that the retirement process has become much more complex and disorderly. Thus, an examination of late career patterns might provide some information about the changing retirement process. Despite the great achievement of past studies, such career pattern issues have been examined only recently. This research examines late life job hange, return to employment, and the trend toward greater diversity in the late employment activity.

Purpose of the Current Research

Exit from a long-term career job (for example, from age-structured or primary employment) is, in the traditional point of view, conceptualized as a one-step process. However, a growing body of literature suggests that the retirement process is changing and fewer workers experience a simple one-step retirement. First, some workers leave their long-term jobs very early and take bridge jobs until retirement. Second, some workers do not have internal market careers at any time. The internal labor market has high wage jobs and good working conditions.

The purpose of this research is to examine patterns of career endings after age 55 and before social security eligibility. What predicts the pattern of career endings that individuals experience? What predicts whether individuals will follow the traditional age-structured one-step exit from the labor force? To examine these issues, I identify several new work exit patterns (Figure 1.3), which will be defined later, and estimate the effects of work sphere variables on the pattern followed.

This research is a good opportunity for examining a causal explanation of work exit patterns. This study employs age 55 measures of the independent variables and post-55 measurement of the dependent variable. This design clearly distinguishes timing differences between exogenous and endogenous variables. Thus, the study is able to estimate causal factors that affect exit events.

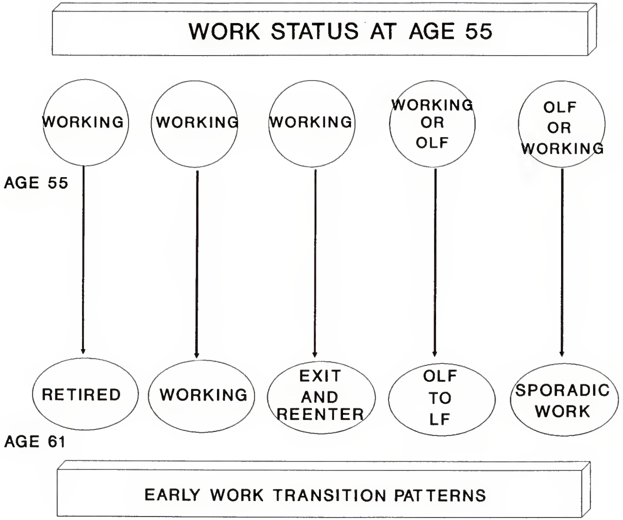

FIGURE 1.3 PROPOSED WORK EXIT PATTERNS
Note: Out of Labor Force (OLF), Labor Force (LF)

CHAPTER 2
THEORETICAL PERSPECTIVES

Life Course Perspective

Recent studies of the life course have revealed that the traditional life course of men has changed in the last two decades (Kohli and Rein 1991). Since the 19th century, the life course pattern has been established as a threefold division of life (education, work, and retirement). Recent changes in labor force activity have reduced the period of work and lengthened the retirement period. The massive early departure from the work force is one of the major components that have produced a more heterogeneous exit patterns. As a result, more emphasis in the life course perspective has been put on the diversity of retirement behavior in late life. The study of labor force activity in the framework of the life course centers around the timing and scheduling of retirement (Elder and Pavalko 1994), work after retirement (Hayward, Hardy, and Liu 1994), the use of a bridge job during preretirement (Ruhm 1990a, 1991) and the nature of postretirement employment activity.

The life course perspective assumes that changes of life course patterns in recent years have been driven by the organization of work and the institutions of national governments (Kohli 1987; Mayer and Schoepflin 1989). Work organizations and state institutions have become highly age structured during this century (Anderson 1985), resulting in greater life course standardization. This process is called life course institutionalization. However, the declining age of retirement and elimination of mandatory ages for retirement in recent years have loosened the age structuring and chronological organization of the life course (Guillemard and Rein 1993; Guillemard and van Gunsteren 1990) or temporarily halted the institutionalization of the life course (Held 1986). Thus, this transformation may reorganize late life careers. Declining life course institutionalization puts an emphasis on the increasing diversity of the life course (Henretta 1993; O'Rand 1990) in an examination of late career employment.

Recent research suggests that age structuring of employment produces institutionalization of life; that is work institutions create a strong age patterning to life (Kohli 1986; Riley, Foner, and Waring 1988). If this pattern of age-structured employment is weaker among certain groups, institutionalization may be confined to certain segments of the population--that is, the hypothesis of institutionalization is highly valid for some individuals who retire from their career jobs but is unlikely to be true for other individuals who withdraw early from the career job and later retire from their second career job or bridge job. Thus, the life course perspective indicates two different exit patterns out of the labor force to retirement: direct movement from career job to retirement and a several-step movement to retirement. The first is a one-step exit from the career job to retirement. The second is multiple-step exit through postcareer job to retirement.

The Sociology of Age and Employment

The sociology of age perspective on career patterns is predicated on the assumption that age structures employment careers (Riley 1987; Riley, Johnson, and Foner 1972). Age structuring means that career events are time dependent. Age structuring of employment involves numerous age processes. For instance, state-based institutional rules governing education, public pension-receipt age, mandatory retirement age, and so on, may produce the age structuring of employment careers. Age patterning also is produced by work rules (Spilerman 1977). This includes pension entitlements, fringe benefits, and job security. Thus, age patterning is an important aspect of the work place in the modern era.

However, there is some evidence that non-age-based employment has recently increased (Belous 1990; Polivka and Nardone 1989; Freeman 1988), though age-structured and non-age-structured employment both exist within firms. The changing configuration of employment age structuring is explained by the changing structures of work organizations (Kohli 1994) and the shifting industrial distribution of employment (Osterman 1988) in recent years. This changing arrangement for work raises an issue of how indicators of age-structured employment are related to the late work exit patterns.

The sociology of age perspective hypothesizes that age criteria structure works along the axes of gender, race, and ethnicity (Riley 1987; O'Rand 1990) but the recent increases in service employment, part-time work, and temporary work have led to greater attention to employment structures differentiated into primary and secondary employment. Age structuring of work is different across primary and secondary labor markets. Indicators of age-structured work (pension coverage, long-term tenure, and union membership) are closely tied to the internal market career but weakly associated with the secondary market career. Thus, in the secondary market neither time (e.g., seniority) nor age determines career events.

The sociology of age perspective predicts that weak age structuring of career work is conducive to early exit from work and transition to the postcareer labor activity, but firm (or high) age structuring of career employment produces a one-step transition from career job to retirement. The reason for this difference is that age-structured employment implies pension and seniority rules that produce a more regularized exit.

CHAPTER 3
EXPLORATORY PERSPECTIVES

The conceptual model in this study of work exit adopts two structural perspectives. Current research is based on these approaches to work exit in later life. One approach is the labor market perspective, which assumes that work exit behaviors are driven by the organization of the labor market, which is beyond the control of individual decisions. The other is the work organization perspective, which assumes that early retirement is significantly influenced by a structure of work organization, such as characteristics of occupation and work attributes. The two perspectives are complementary in explaining early exit behaviors in that the former, at the macrolevel, emphasizes the mutual interactions between the firm and other actors--the labor union, the state, and the elderly worker; the latter tends to emphasize the microlevel role of firms in shaping the early exit policy. However, these two perspectives are very similar in providing a firm-oriented framework. The labor market perspective identifies important actors (the firm) and the microlevel perspective specifies the reasons why firms are important.

Labor Market Perspective

The labor market perspective suggests that social policy is unable to deal with the early exit trend because institutional pathways fundamentally have limited impact (Kohli 1994; Kohli and Rein 1991). Changing or eradicating an institutional pathway for early exit does not hold workers longer at jobs, and other pathways are more likely to replace the abolished retirement program if available (Casey 1989). Social policy or institutional programs to reduce early exit will not work effectively if the labor market does not accommodate elderly workers. Thus, the labor market perspective indicates that whether the early exit trend continues or not depends on the evolution of the labor market. The future magnitude and shape of the early retirement trend will be affected by the interplay between labor market conditions and actors in the labor market. Firms, labor unions, and elderly workers play very important roles in changing early retirement patterns.

The labor market perspective also guides some empirical research on early exit which has been done both at the macrolevel (Pampel and Weiss 1983) and microlevel. This perspective provides some conceptual tools that describe and explain retirement using work sphere and labor market characteristics. It is easy to see that occupational characteristics and general labor market conditions such as unemployment, size of the labor force, and location of jobs, may affect the early exit trend. Thus, the labor market perspective provides a conceptual tool and guides empirical research on the early exit pattern in this study.

The labor market perspective views work organization as an independent reality. Thus, work organization has its own distinctive structures and dynamic governing rules. This view emphasizes the roles of companies, unions, and states (Kohli 1992, 1994) and the conditions of labor markets (Johnson 1994) in producing early exit. However, the recent literature seems to emphasize the role of the firm more than that of other actors in shaping retirement policy (Rein and Jacobs 1993) and, importantly, links early retirement to the work sphere (Kohli and Wolf 1994). According to this view, early retirement is the outcome of interactions among companies, unions, and older workers. In this process, the state produces institutional pathways and allows firms to use the public social security system to shed workers.

The labor market perspective also argues that structural components, such as the condition of the labor market, may work to encourage early retirement. This means that the employment activity of older workers will be strongly influenced by the general state of the labor market. For example, a high unemployment rate in the local labor market may induce older workers to retire earlier.

Work Organization Perspective

Overview

This microlevel perspective starts with a research problem that there are variations in early exit rates across occupations, and attributes the exit rate differences to occupational characteristics and the nature of work in the occupation. Hence, occupational structure is a key concept, and this concept is measured in two ways: occupational characteristics and nature of work. Occupational characteristics are attributes of occupations and include the nature of employment contracts, the seniority wage system, over-time pay provisions, union membership, etc., which are related to the firm and unions. At the microlevel, these characteristics measure relevant aspects of the interaction between firms and workers discussed in the labor market perspective. These components of work structure have an influence on the early exit rate. Also, the nature of work, which is defined by occupational task, physical demands, and working conditions, explains early retirement. In short, this occupational structure accounts for the previously established relationship between work and retirement, and so reveals that work characteristics are an important domain of study in explaining the early retirement trend which has been evolving during the last two decades.

Studies of the occupational influences on work exit propose that the structural characteristics of an occupation are closely tied to the early work exit pattern. The point is that early work exit is influenced by the nature of the work and the occupational structure. The nature of the work acts to induce older workers to quit or stay. Thus, a good job that is physically less demanding tends to delay the retirement of older persons. Also, occupational characteristics which are defined by compulsory retirement regulations and pension coverage have a direct salience for early work exit. Well-paid workers tend to stay longer than their lower-paid colleagues (Quinn 1978; Hayward and Grady 1986).

This study of the influence of occupational characteristics on early retirement concedes that health problems and availability of retirement income sources are key factors, but exclusive focus on physical health and income fails to address adequately the influence of work environment on the potential retirement decision. The environmental factors of work influence the retirement decision within a medical and economic framework (Hayward 1986).

Occupational Structure and Work Exit

The empirical research, which systematically adopts the work organization perspective, shows interesting results and supports the point that early work exit is more likely for elderly workers whose jobs have undesirable job attributes. Quinn (1978) reported, from an analysis of the Retirement History Study data, that the nature of work is strongly related to a retirement decision. In his research, the nature of work is measured with seven dimensions of a job. According to the results provided by Quinn (1978), older workers who participate in a whole sequence of tasks are more likely to stay at the job than those who do not participate, and persons involved in repetitive work show a higher level of early work exit. Also, older workers who work under bad working conditions, stress, and high physical demands are more likely to leave the job early. In Quinn's study, the possibility that work conditions are a proxy for a health problem is explored. However, job characteristics are observed to have a significant relationship to early retirement even though health conditions are controlled in the analysis.

In Quinn's study (1978), the measures of work characteristics include whole activity, repetitiveness, specific instructions, stress, strength, physical requirements, and bad working conditions. "Whole activity" refers to the direction, planning, and control of the whole sequence of activity. Repetitiveness involves a routine work task that is executed by a set of procedures and sequences. The stress, strength, and physical requirements in the list measure the physical demands of jobs. Finally, bad working conditions are defined by an adverse working environment, such as extreme noise or vibration, heat or cold, wet or humid conditions. Quinn's research (1978) shows that work characteristics are an important determinant of early work exit.

Hayward and Grady (1986) investigated the impact of structural characteristics of various occupations on work exit patterns. In this study, subjects, who are drawn from the March Current Population Survey (annual demographic file) are 55 to 70 years old, and the work exit rate is measured with two sets of job movements: moving into the job from out of the labor force and from other jobs, and moving out of the labor force and to other jobs.

Hayward and Grady (1986), in the above study, argue that the structural features of work are important factors in early retirement and report confirming results. Three work context variables have very significant effects on the log odds of retirement versus staying; substantive complexity and occupational growth, which is defined as the ratio of the number of incumbents in the current year to the number of incumbents in last year, both suppress workers' movement to retirement. This indicates that older workers who are involved with data, who have extensive training and who participate in a whole sequence of work are more likely to remain on the job. However, physical and environmental demands tend to push older workers out of their jobs, which means that a job requiring high strength in later work life tends to induce early retirement. These results support the hypothesis that favorable work attributes help to retain older workers in their jobs.

Hayward (1986) investigated the effect of occupational characteristics on early work exit, but a different aspect of this study from the previous one is an emphasis on occupational characteristic variables which were overlooked in the previous study. Hayward argues, in the study, that early employment exit is explained by the work context, which includes nature of work and occupational characteristics. For the examination of the question, Hayward used the National Longitudinal Survey (NLS) data and the fourth edition of the Dictionary of Occupational Titles (DOT) from which information about work characteristics (i.e., substantive complexity and physical and environmental demands) was obtained.

The results obtained from the analysis done by Hayward (1986) provide support for the argument that early retirement is a function of occupational structure. Two occupational characteristic variables significantly influenced the probability of exiting the job early: wage and compulsory retirement regulation. The existence of compulsory retirement rules appears to increase early retirement, which indicates that elderly workers facing this obligatory rule leave employment early and seem to respond to available economic incentives. Also, high wages work to push the workers to leave early, which Hayward believes to be an indirect effect. The pension benefit and wage are highly correlated with each other so that wage is an indirect effect of post-retirement pension income. The level of pension is determined by the wage received on the previous job. The employer-provided pension increases early retirement, but persons with only social security eligibility are less likely to retire early. Private pensions often have a lower age of pension eligibility than social security. Finally, the four occupational structure variables, tenure, wage, union membership, and compulsory retirement, reduce the effect of private pension eligibility, which indicates that occupational characteristics account for the relationship between pension and early retirement decision. In previous research, the relationship had been overestimated when these variables had not been included.

The labor market perspective and occupational structure perspective have been reviewed to guide this current research. I argue that the work sphere, including labor market and occupational structure, substantially influences early work exit behaviors, and the magnitude of influence is not smaller than other covariates. Corporate actors in the labor market, firms, and unions are under heavy pressure due to changing work environments. Firms are influenced by competition in domestic and foreign markets, and labor unions increasingly are being challenged. This general context of the labor market affects work exit patterns both directly and through firm behavior. Figure 3.1 shows an influence of the labor market and work organization on early work exit patterns.

Conceptual Framework of This Study

This section, first of all, summarizes the main ideas in this chapter and restates the conceptual framework for this study. In the presentation of the conceptual framework, the labor market perspective and the work organization perspective are highlighted.

Implications of the labor market perspective for retirement and current research have been discussed in this chapter. Also, I have introduced the work organization perspective on the early exit trend. This work organization perspective is different from the labor market perspective with respect to unit of analysis. The former approach is more likely to emphasize an interplay between entities in the labor market, but the latter tends to zero in on attributes of occupations and the nature of work. The two approaches are very similar in emphasizing the organization of work for explaining early work exit.

Based on this discussion, I build an framework of this study (Figure 3.1). In the framework, labor market organization and work organization are important determinants of early retirement. These two factors account for the relationship between individual characteristics and retirement, in which individual demographic characteristics are assumed to be very basic features of retirement variation. However, these individual traits are not diagramed in the figure because I emphasize more the roles of labor market and work organization. The general state of the labor market and the work organization influence each other and affect the exit rate.

Now that I have explained the exploratory perspectives on early work exit and conceptual framework of this study, I will now review the literature on elderly employment activity. These research studies show that early retirement is influenced by work characteristics and individual characteristics.

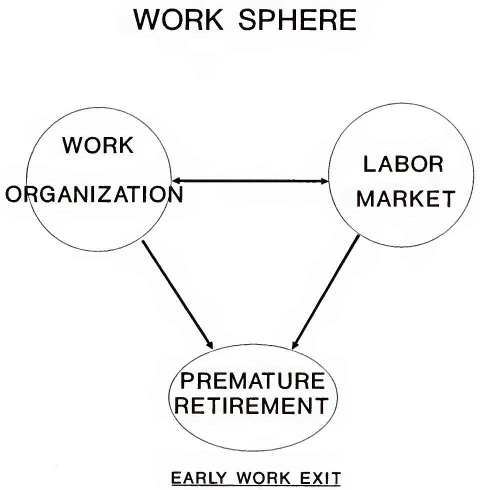

FIGURE 3.1 CONCEPTUAL FRAMEWORK

CHAPTER 4
ELDERLY EMPLOYMENT ACTIVITY

Many recent studies of elderly labor force participation have shown important results. First, the pattern of labor force participation during the last two decades has become vastly different from that of the past. Older people increasingly leave the labor force prior to reaching the retirement pension eligibility age, 62. Second, many retirees, after the first retirement from their long-term career jobs, reenter the labor force. About 10 to 25 percent of retired older workers take another job and start a second career. The reentry to the labor force by retirees in later life has been increasing. In an effort to understand this development, I examine early exit trends and work exit patterns.

I will briefly review the literature on elderly employment activity. The literature that will be presented in this section can be classified into two kinds of research. One type of study uses aggregate statistics of U.S. population surveys and the other type of research takes advantage of individual data from survey research. The aggregate statistical profile of labor force participation has shown a rising rate of early departure. However, the individual data has unveiled the specific and complicated work exit patterns of elderly workers. These two types of studies adequately represent the current state of research on early work exit patterns in later life. Thus, this chapter will begin with a general profile of early exit rates and an examination of the specific employment patterns will follow.

Although the study of work exit patterns from the career job is called different names by different authors, the analysis of work exit from career job or labor force withdrawal is an examination of retirement behaviors (Duggan 1984). Labor force transitions in later life are almost a synonym for studying retirement behavior, and most studies adopt this view. Since retirement was established as social regime or institution in the mid-century (Atchley 1982), employment transition by the elderly has been equivalent to gradual retirement toward permanent labor force exit with a few exceptions. Thus, an investigation of postcareer employment activity is all but a study of the retirement process (Peracchi and Welch 1994), and many studies of retirement behavior are relevant to this review of work exit from the career job.

Rising Trend of Early Exit from the Labor Force

There has been much research on the early withdrawal trend. Many of the studies present an overall picture of early exit during the last decades.

Tuma and Sandefur (1988), in an analysis of data from the Public Use Microdata Samples (PUMS) by age and year, reported that the rate of early exit increased from 1940 to 1980. The general purpose of their study was to describe patterns of labor force activity during the period from 1940 to 1980. According to this study, the probability of departure from the labor force was still small, but increased between ages 55 and 61 in all years. The change rate (slope) in this age range was noticeably accelerated in 1970 and 1980. The early withdrawal rates for ages 61+ were rising constantly during the whole period between 1940 and 1980. The withdrawal rate jumped sharply in 1960, and the proportion of those exiting the labor force rose steadily up to age 65. In 1970 and 1980, the withdrawal rate sharply jumped between age 62 and 65. For age 65+, the slope in 1970 and 1980 was approximately similar to that of 1940. In short, this research revealed that the rate of early withdrawal has increased for the younger age group of 55-60 during every year.

Quinn and Burkhauser (1990) reported results similar to those of Tuma and Sandefur (1988). Quinn and Burkhauser analyzed unpublished U.S. Department of Labor data on the male labor force participation rate, by age, between 55 and 70 from 1968 to 1986, and revealed that the labor force participation rate declined at every age during this period. The decline was the largest between ages 62 and 65. The declining rate began as early as age 55 and continued as late as age 70. This result is similar to that from previous research by Tuma and Sandefur.

In this vein, several research studies reported that the elderly labor force participation (LFP) rate has dropped noticeably in recent years. Ellwood (1985) revealed that the proportion of individuals aged 65 and over who work dropped by 15 percent (from 35 percent in 1960 to 20 percent in 1980). Also, Parsons (1980) found that the labor force participation rate of individuals aged 55 to 64 declined by 15 percent (from 89 percent in 1948 to 74 percent in 1976). Similarly, Ruhm (1989) reported that the LFP rate of older men has declined steadily during the last 30 years. Ruhm reported that the LFP rate for those aged 55 to 64 dropped from 89.6 percent in 1947 to 67 percent in 1987, and that the rate for those aged 65 and over declined from 47.8 percent in 1947 to 16.6 percent in 1987. Other research has also reported the same trend (Peracchi and Welch 1994; Sheppard 1991; Robinson, Coberly, and Paul 1985; Clark and Barker 1981).

Exit Patterns from Career Jobs

Since early departure from the career job, defined as the longest job held at least 10 years, triggers the issue of career patterns between exit from career job and permanent exit out of the labor force, this precocious withdrawal is important to an examination of work exit patterns from the career jobs.

Studies of work exit patterns after initial retirement from the career job focus on transitions and trajectories of work exit (Elder and Pavalko 1994), work experience after retirement (Hayward, Hardy, and Liu 1994; Hardy 1991; Myers 1991; Beck 1985), bridge jobs and partial retirement (Ruhm 1991, 1990a, 1990b; Honig and Hanoch 1985; Gustman and Steinmeier 1984), and work status change (Peracchi and Welch 1994; Blau 1994; Berkovec and Stern 1991; Reimers and Honig 1989). These research studies identify work exit patterns and estimate the size of each category. The previous studies on early exit from the labor force by Tuma and Sandefur (1988) and Diamond and Hausman (1984) tended to overlook complete behaviors of individuals because they examine only the simple outcome of labor force exit. However, more recent research on work exit pattern by Ruhm (1990a) and Hayward et al. (1994) pays more attention to exit behaviors as dependent variables because the traditional model of retirement does not capture the changing retirement pattern.

The old conceptualization of retirement as a dichotomy simplifies the actual retirement behaviors by modeling retirement as a one-step transition and as irreversible. Such modeling may well conceal more than it reveals. The more recent literature on work exit behavior tends to use a dynamic model of retirement and multiple transition models.

The examination of work exit from the career job has been expanding in recent years, but Achenbaum and Morrison (1991) suggested that unretirement (work after retirement) is more long-standing, which indicates that reentry to the labor force after an initial exit may have existed since the beginning of this centuries. Ransom and Sutch (1986) pointed out that the tendency of workers in highly-demanding industrial jobs to retire in a gradual fashion was not rare in the nineteenth and early twentieth century. But increasing attention has been given to this unretirement pattern in recent years.

The recent growth of literature on work transition patterns can be attributed to two reasons. First, since the age of retirement has declined to the age bracket of 55 to 59, many researchers in academic circles have begun to question who early retirees are and why these individuals retire early. Second, there has been increased awareness of future labor force shortages, concern about the financial crisis of the public retirement funds, and debate over a reduction of the U.S. federal budget deficit among policy makers and the public. In short, academic questions about the nature of early labor force withdrawal and financial concerns about the public retirement fund crisis among the policy makers have promoted the increased interest.

Bridge Jobs

Bridge jobs are ones that "bridge" the time between a career job exit and final retirement. Ruhm (1990a, 1990b, 1991) defined career job as the longest job held, regardless of when that was or how long it lasted, and argued that work transitions after exiting from career jobs, are some mixture of bridge jobs, partial retirement, and reverse retirement--that is, many early retirees engage in some kind of work between the career job and permanent exit. They often reduce hours of work, or reverse retirement. Ruhm, in those articles, reported that fewer than 40 percent of the the Retirement History Survey (RHS) sample retired directly from career jobs, more than 50 percent of the sample partially retired at some point in their working lives, and 25 percent reentered the labor force after initial retirement. Most held at least one bridge job before making a permanent labor force exit. Ruhm showed that 75 percent of the sample changed industries or occupations between career jobs and bridge jobs, and almost 50 percent switched both. Thus, most bridge jobs are located outside the industry and occupation of the career job.

Ruhm, in the same articles, presented an interesting profile of work exit patterns from the career job. Some workers moved first to part-time status on the same career job, and others took new full-time or part-time work in a different sector, often in a different industry or occupation from the career job and at nearly a half-reduced wage from the career job. This result revealed more complex patterns of retirement than the traditional retirement concept is able to capture.

Iams (1987), in an analysis of the new social security retired-worker beneficiary sample, revealed that 20 to 25 percent of workers were working after receiving social security benefits. Work after retirement lasted 18 to 30 months. Most retirees stayed with the same employer and held part-time jobs by reducing hours per week. Among the workers who switched employers, the median wage was reduced by one-half from that earned on their longest job.

Quinn, Burkhauser, and Myers (1990), in an analysis of 10 years of the RHS, reported work exit patterns in the transitional period of late work life. They defined a career job as a full-time job held more than 10 years in which the person worked full time (at least 35 hours per week). Work exit patterns were examined by occupation. According to the analysis, more than 25 percent of wage and salary workers reentered the labor force after exiting their career jobs. Most of the wage and salary employees took another full- or part-time job. Very few workers switched to part-time work on the career job. The older workers who were making the transition were more likely to move to new part-time jobs, while younger workers took full-time jobs. Poor health, mandatory retirement, and pension eligibility tended to push the older workers to leave the labor force.

Most retirees took new jobs right after the end of their career jobs or within two years, and the new jobs often lasted long enough to be second career jobs in which individuals spent at least 10 years. Also, many of the new jobs were located in work lines different from career jobs. Approximately one-third of workers in the private, government, or self-employed sector who changed employers switched to another sector. The job change usually involved a wage loss, as Ruhm also showed. Finally, 50 percent of self-employed male workers exited the labor force after quitting their career jobs. About 25 percent moved to part-time work in the career job, and the remaining proportion of workers moved to new jobs.

Partial Retirement

Partial retirement is a kind of work exit pattern from career jobs. Many workers desire to reduce the burden of current full-time work at some point during their work careers. The tendency to reduce work time at the end of the career also is found in historical studies of retirement. The category of partial retirement is based on needs of workers and an important pattern of retirement behaviors. In this sense, partial retirement is usually different from the bridge job. Partial retirement occurs later in the work life than the bridge job. Partial retirement rarely happens prior to age 58 and becomes much more prevalent in the age range from 60 to 67. However, the bridge job is widely reported to occur earlier in the work life, beginning at about age 50.

Partial retirement is almost parallel to bridge jobs or part-time jobs in terms of earnings and work hours. The jobs that are occupied in partial retirement usually are located in occupations or industries different than previous career jobs. Transition to partial retirement is the threshold of the retirement process toward a permanent exit from the labor force. Thus, partial retirement is a kind of work exit pattern, being very similar to other transitional employment patterns.

Honig and Hanoch (1985) and Honig (1985), in an analysis of the RHS, 1967-1973, used amount of earnings as an objective criterion of partial retirement and classified individuals as partially retired, in comparison to the previous year, if they earned less than a half of the previous total annual earnings. Honig and Hanoch (1985) reported that 14 to 27 percent of male, married, and white workers aged 58 to 67 became partially retired from 1969 to 1973. However, these studies understate the prevalence of partial retirement because they observe individuals only a short period of time.

Gustman and Steinmeier (1984, 1985), in an analysis of the RHS, 1969-1975, reported that around one-third of salary and wage workers aged 58 to 69 were partially retired at some time between 1969 and 1975, and the proportion of partially retired individuals increased with age. Interestingly, they found that jobs of partial retirees were located in occupations and industries different from their previous career jobs and involved a pay cut.

Employment Status Changes

The movement between job statuses, part-time, full-time, and nonparticipation, is another pattern researchers have used to define the retirement process. The following literature adopts this approach.

Peracchi and Welch (1994) reported the results of their study on job transitions. One of the results is that early retirement has increased during last two decades, as the previous studies showed. The other is that retirement at age 62 has increased dramatically. In addition, exit from full-time work has increased during economic recession.

Peracchi and Welch (1994) used the Current Population Survey data (CPS). The matched CPS is composed of short panels which are created by matching individual records across adjacent-year files of the March CPS. According to the authors, use of matched CPS provides a rich source of information on labor force activity. Thus, the authors are able to examine labor force transitions and participation patterns over time. However, the authors note that the CPS data have disadvantages--that is, the matched CPS provides only a change over a one year period, and a high attrition rate is another disadvantage that results from the individual mobility and noninterview.

In an effort to investigate job transitions, Peracchi and Welch (1994) classified three labor force statuses into full-time, part-time, and retirement and examined the transitions between them. First, the authors showed a transition from full-time work to retirement, which increases slowly at early ages, between ages 49 and 58, and goes up rapidly after age 59. The first spike of the exit rate was found at age 61, and the second spike appeared at age 64. After age 64, the transition rate from full-time work to retirement declined slowly. The first spike at age 61 is associated with the current social security system, which constrains work beyond age 62. Interestingly, jumps at ages 61 and 64 also were found in the transition from full-time to part-time employment. This would indicate that many older workers partially retire at those ages.

Second, part-time work is a transient state that depends on age. The hazard of staying at a part-time job increases significantly with age. Third, the transition rates from retirement to the other three labor force statuses are very low and they decline slowly with age. Exits from retirement to other labor force states are very low after age 60. Exits occurring after this age seem to be final job transitions.

The multivariate analysis using the multinomial logit (Peracchi and Welch 1994) showed interesting results. Unemployment status was an important predictor of work transitions. A high unemployment significantly raised the probability of leaving the labor force. Education also was a significant factor in predicting job transitions. Higher education reduced the probability of leaving full-time work and increased a probability of entering the labor force from retirement. The race effect was a very significant predictor of exit from full-time jobs. The hazard for blacks was higher than that for whites. Nonmarried persons had a higher likelihood of leaving the labor force and were less likely to exit the retirement state. Also, the presence of children significantly lowered a likelihood of leaving the labor force. In short, most results of Peracchi and Welch's study are very similar to those of previous research.

Myers (1991) examined older workers who left their career jobs and identified four different types of the postcareer jobs: traditional retirement (no return to work), part-time on career job, part-time on new job, and full-time on new job. Also, the results of his multivariate models show that pension, social security, and economic variables have an influence on postemployment behavior in distinctive ways. The specific results are discussed below.

Myers (1991) used the Retirement History Study of the Social Security Administration (RHS), which is commonly used for the study of labor history. The RHS included 11,152 households in which men or single females were selected for the sample. However, Myers excluded female respondents in this study because they were an incomplete representation of the female population, so only males were included in the analysis. Finally, his study obtained a sample of 1,209, who were employed at the initial survey of 1969 as a wage and salary worker on a career job. Career jobs are ones in which an individual has spent at least 10 years working for the current employer and in which the worker currently works full-time.

The results of Myer's study showed that most workers (73.8 percent) retired from the career job and did not return to work. Only 26.2 percent of the sample resumed employment activity after exiting full-time work in their career jobs; among them, 11.4 percent of retirees took new full-time jobs and 10.2 percent of them took new part-time jobs. Part-time work in the career job was least common, with 4.6 percent of the workers taking this kind of job.

The estimation results for the independent variables provide interesting outcomes that also are well documented in the research discussed earlier. Pension eligibility had the largest effect among all variables in question. Someone eligible for an employer pension on a career job had a higher probability of exiting the labor force than those without such eligibility by 27 percent. Among all types of exit patterns, the probability of taking a new full-time job was affected mostly by pension eligibility, which decreased the likelihood by 15.94 percent. The social security measures appeared to be significant, and these variables were eligibility for social security and change in wealth. Individuals eligible for social security were 10.41 percent more likely to take new part-time jobs than non-eligible persons. The coefficient of change in social security wealth showed that an increase in pension wealth encouraged part-time work over full-time work.

The market wage, from the results of Myers' study (1991), was significantly associated with full-time work on a new job, but was not related to the other exit patterns of part-time work in the career job and part-time work on a new job. Thus, a higher market wage increased the probability of returning to work full-time on a new job.

The occupational structure variables provided interesting results that indicated how occupational characteristics affect postcareer employment activity patterns. First, a compulsory retirement was significantly related to part-time work on the career job but did not have an influence on other types of exit patterns. A mandatory retirement rule reduced a probability of returning to part-time work on a career job. Second, tenure on a career job was not significantly related to the exit pattern, but the coefficients suggest that lengthier tenures on the life-time career jobs negatively affected the return to work on new job but positively affected a return to part-time work on the career jobs.

The individual characteristics used in Myers' (1991) study were important in predicting postcareer employment activity. Age effects on work exit patterns showed that older individuals avoided full-time work on new jobs but were more likely to take part-time employment in the previous career jobs. Level of education also was very important in the postcareer employment decision. Highly educated workers were more likely to return to employment after exiting career jobs, and less-educated persons were less likely to reenter the labor force. Also, an individual's attitude toward work was a significant factor in predicting work after retirement. Older workers who said that they would never quit working were more likely to return to new jobs. Finally, marital status was important, too. Married older workers were more likely to have new full-time jobs than the nonmarried older workers. An explanation for this result is that married persons need more money for the maintenance of their households. In summary, the study of Myers provided useful results that are similar to those of other research.

Blau (1994) analyzed quarterly records of work history from the Retirement History Survey (RHS), and interestingly, showed that the previous studies of elderly work exit patterns underestimated a substantial amount of retirement behavior. The previous research on work exit patterns took advantage of annual or biannual data in RHS, but the quarterly records of RHS provide more detailed employment information than the biannual data. Blau (1994) reconstructed the records of individual work status in every quarter, which the biannual data may miss. This methodological aspect of the research is a major advantage over the previous annual or biannual labor history data.

Blau (1994) categorized work status into three employment statuses, nonemployment (out of labor force), part-time, and full-time work, in order to examine the movement of older men among the labor force statuses, as Peracchi and Welch (1994) did. From his analysis, Blau reported that 12.6 percent of persons holding full-time employment moved to part-time work, which means that a relatively small number of elderly workers gradually retire. Most of the full-time workers (66.4 percent) changed their current status into nonemployment, and 21 percent of workers were censored. Among the workers who are employed on part-time jobs, 22.6 percent moved to full-time employment, 66.4 percent left the labor force, and 29 percent were censored. Of the older workers who were out of labor force, 16.3 percent took full-time jobs, 9.4 percent moved to part-time jobs, and 74 percent were censored. The results show that the most common destination after an employment change in later life is out of the labor force. Some workers moved to full-time or part-time work that is transient to the final labor force exit, but the most common pattern is to move out of the labor force by temporary withdrawal from the labor force or retirement.

Another unique aspect of Blau's (1994) study is that he identified the labor force sequences that many labor economists overlook, and he estimated the determinants of these sequences. The typical labor force sequences identified by Blau include continuous full-time work (20.5 percent of 6,211 full-time workers at age 55), the standard pattern of permanent exit (50.6 percent of full-time workers at age 55), simple patterns involving part-time work (8.5 percent of full-time workers at age 55), continuous nonparticipation (60.2 percent of 591 persons out of labor force at age 55), and other multiple transitions including combinations of the above categories.

The multivariate analysis of the exit patterns by Blau (1994) showed that pension-covered persons are more likely to follow a standard course from full-time work to retirement, and the chance for them to work on a part-time job is less than persons without pensions. Older workers with higher education are more likely to work longer than persons with lower education, but they ultimately retire from their full-time jobs. Nonworkers with a health problem are more likely to continue their nonparticipation in the labor force and are unlikely to work in full-time jobs. Wage effects are small and are significantly associated only with continuous full-time work and standard permanent exit. A higher wage increases the probability of working full time and following a permanent exit pattern.

Recent Studies of Work Exit Patterns

The most recent studies of work exit patterns have increasingly emphasized specification of explanatory variables and elaborated on the multivariate model of work exit patterns. This research has identified and estimated the effects of predictors of work exit behaviors. Emphasis on estimation of predictors in recent literature reflects a change in emphasis when compared to the older literature in a sense that the main focus has moved from identifying the pattern to estimating models of work exit. Thus, this development of research indicates that the current literature is a methodological and theoretical advancement over earlier studies.

Hayward, Hardy, and Liu (1994), in an analysis of the National Longitudinal Survey of Older Men (NLS), examined movement from out of the labor force to new part-time or new full-time jobs, and estimated multivariate models. This research examined reentry for a sample of individuals who exited after age 55 and prior to the end of observation. According to the authors, the dominant work transition pattern is that older workers reenter the same type job that was held prior to exiting. Of those who moved to a postretirement part-time job, 57 percent worked part-time prior to exiting the labor force, but 43 percent worked full-time before exiting the labor force. However, 96 percent of those who moved to a full-time job worked full-time prior to exiting the labor force. These results indicate that the pattern of full-time reentry is one of persistence, but the pattern of part-time reentry is equally one of persistence and reduction of work hours. That is, some full-time workers reentered the labor force through part-time jobs. Importantly, an interesting finding was that the overall proportion of part-time workers increased from 17 percent to 33 percent as individuals moved from preretirement to postretirement employment. This indicates that many older workers tend to reduce work time and engage in part-time work.

Hayward, Hardy, and Liu (1994), reported the effects of predictors on work activity after retirement. First, individual social traits were reported to affect the reentry process. Age was negatively related to reentry. Younger retirees were more likely to work after retirement, but older retirees were more likely to remain out of the labor force. Health status was linked significantly to reentry. Men in poor health were less likely to return to work. Married retirees whose wives did not work were less likely to reenter the labor force. Education was not significantly related to reentry, but the coefficient for education indicated that individuals with higher degrees were more likely to reenter the labor force and delay retirement. Race was not significantly tied to the reentry, but the coefficient for race implies that whites are more likely to return to work than other races.

Second, according to the same research, the characteristics of the job held prior to exiting the labor force were significantly linked to the reentry process. Job tenure was negatively tied to reentry. Older individuals with longer tenure were less likely to reenter the labor force than individuals with irregular work histories. The reentry rate was different across classes of workers.

Workers who were self-employed prior to exiting the labor force were more likely to return to work than workers in private and government sectors. Similarly, there were occupational differences in reentry. Reentry was more likely for professionals, sales workers, and farm laborers than laborers. Third, labor market situations influenced the retirement process. The unemployment rate in the residence area was significantly negatively linked to reentry. In residence areas with a higher unemployment rates, retirees were unlikely to return to work and remained in retirement. Also, retirees in metropolitan areas were less likely to return to work. Both findings indicate retirees are more likely to reenter the labor force when competition for jobs is very low. Finally, a couple of indicators of income sources were not related significantly to the reentry process. Neither source of retirement income or level of preretirement (prior to exiting the labor force) income affected reentry. Only the inflation rate, among indicators of income source, was related to reentry behaviors. This result indicates that income loss attributed to inflation may push individuals to work again.

The study of Hayward, Hardy, and Liu (1994) gives one of best specifications of explanatory variables. This research shows that retirement behaviors are determined by social forces in later life which are individual social characteristics, occupational structures, and the organization of labor markets. Among them, occupational structures and conditions of the labor market are more important to understanding the retirement pattern.

Elder and Pavalko (1994), who analyzed the analysis of life history data on two birth cohorts of men in the Stanford-Terman study, a longitudinal study, reported the main patterns of retirement. The dominant pattern was that most of the individuals retired gradually or exited in a single transition. Also, Elder and Pavalko estimated multivariate model of abrupt retirement versus gradual and sporadic retirement. According to this research, among 517 men, 38 percent reduced hours of work gradually, 8 percent had two discrete exits out of the labor force, 30 percent exited in one step out of the labor force, 16 percent retired in a sporadic pattern, and only 8 percent had not stopped their work when they were observed last. These results also are very similar to those of other studies, even though the sample of this study represented typical individuals of middle- and upper-middle class background.

The multivariate model of work exit patterns, presented in the same article, showed the interesting influences of explanatory variables. Cohort membership revealed that older cohort members were more likely to retire abruptly than younger cohort members. Individuals who think that work is a very important aspect of their lives were more likely to retire in gradual ways than those who had a negative attitude toward work, even though the effect was not significant. The coefficient for work importance indicated that a positive attitude toward work will delay retirement. Healthier individuals were more likely to reduce work time and retire gradually, but the relationship was not significant. Also, abrupt retirement was more likely for sales, clerical, and technical workers than for professionals. This effect may result from the fact that these occupations do not have options for partial retirement. Finally, workers with mandatory retirement rules were likely to retire abruptly.

This chapter has reviewed studies that examined work exit patterns and their covariates. The literature shows that early departure from the labor force has been increasing, but exit patterns have become more diverse. Bridge jobs, part-time work, and return to work after retirement characterize the current situation.

Several individual characteristics affect the pattern followed. Many studies revealed that a serious health induces older workers to retire early and prohibits them from reentering the labor force. Also, private pensions and social security benefits are reported to be significant components of retirement behaviors. The employer-provided pension is a major factor contributing to early retirement which occurs beginning ages 55 through age 61, and social security benefits are related to retirement after age 62.

However, some studies suggest that a pecuniary impact of pension, income, wage, and social security is overestimated, and the magnitude of the influence is not so great.

Research is just beginning to examine the effects of work characteristics, which are closely tied to the evolution of the labor market and modern work society. Substantially, early retirement policy has been created by actors of the labor market, firms, unions, and older workers themselves. This study further examines aspects of the work sphere to further specify findings of previous studies. This study develops a perspective that fully considers the labor market and the occupational structures which are significant structural factors that influence early retirement.

CHAPTER 5
METHODOLOGY

Data Analysis

NLS Data

The National Longitudinal Survey of Older Men (NLS) was used in this study to investigate late employment patterns. The survey, 1976-1983, covers a 17-year employment process for a cohort of men. The 1990 survey provides information about the final retirement and death of subjects. Most respondents passed from middle into old age during the study, and more than 75 percent of the subjects moved from work to retirement; the remaining 25 percent who did not exit were included in the analysis.

This data set contains extensive information about late career employment and retirement. Specifically, the information includes demographic and health characteristics, a lifetime work history, the extent and nature of current work activity, retirement plans, attitudes toward work and retirement, and amounts and types of income and assets.

The respondents in the original sample represent approximately 15 million men in the national civilian noninstitutionalized population (Center for Human Resource Research 1994). The age of respondents in the initial survey in 1966 ranged from 45 to 59, and the total sample was 5,020 men in that year. In 1990, the surviving members of the original cohorts were finally reinterviewed. Their ages ranged from 69 to 84, and the widows of decedents were interviewed. 2,092 surviving men, 1,341 widows of decedents, and 865 other relatives of decedents who had no widow were interviewed. The data in 1990 maintained 86 percent of the original numbers.

The anchor point for observations in this study is age 55. I have studied older men who have already left their career job (the longest job) or are still working on the career job at age 55. I measured employment patterns between age 55 and 61. Large numbers of individuals start to leave career jobs during that age range.

Time Scheme of Data Analysis

Time is an important concept in the analysis of the NLS data. The NLS data used in the analysis is longitudinal; that is, twelve waves of data were collected on a panel of respondents. The NLS typically contains information about the time process of the transition from work to retirement. This study used these data to examine work exit patterns from age 55 through age 61.

Data Analysis

This analysis examined the segment of subjects' lives between ages 55 and 61. The segment is when most early retirement action takes place because age 62 is the age of eligibility for social security retirement benefits. The 55 to 61 segment is important during the retirement process. However, beginning the examination of careers at age 55 was arbitrary. It would have been desirable to begin examining career endings at age 50, but this approach was not feasible with the NLS data. There are very few respondents who were less than age 50 at wave one data collection. The initial sample in 1965 includes respondents aged between 45 and 59.

It should be remembered that some respondents had exited already or were in bridge jobs at age 55. This latter pattern can be identified because the survey provided information about the longest job and whether the longest job was the last or current job.

Using age 55 as the initial age for the analysis has one advantage. At this age, most workers have not left the labor force permanently, and beginning at this age, many workers begin to experience a gradual withdrawal and reentry to the labor force. Thus, age 55 is a reasonable threshold for analyzing entry into the late work life.

The greatest difficulty in the data analysis is capturing the relative timing of employment change, for the study assumes the transitional process is time dependent. However, the interval between each survey in the NLS is two to three years, and the interval between 1983 and 1990 surveys is seven years. From one wave to the next, it was necessary to identify whether a change in state had taken place and pinpoint when it took place. For instance, at wave n the respondent may be in his career job and at wave n+1 he may be retired. However, wave n and n+1 are separated by two or three years. The respondent may have held a bridge job for a full year after leaving his wave n job. Thus, the analysis of data needs to identify the kind of bridge job held. The identification of the bridge job in such cases is often possible, but approximation is sometimes required. This may risk inaccuracy.

Sampling

Using Age to Measure Time of Event

The measurement of employment exit patterns is based on each respondent's age. Each individual has a different calendar time point of starting the retirement process. This varies because respondents were born in different years as well as exit at different ages. Thus, individual workers experience their labor force exit or bridge employment at different individual calendar times. In the analysis, I organized data by age and included older workers who were 55 to 61 years old at sometime between 1966 and 1990. In short, the objective calendar year (i.e. 1966, 1967,......1983, 1990) marks the collecting point of data and the passage of historical time but does not organize the data structure.

Sampling Method

A purpose of this study is to explain the employment exit patterns spanning from age 55 through age 61. Thus, all respondents who turned 55 at any time during the survey period were included in the sample. The basic age distribution of the total population in the initial survey year, 1966, was 45 through 59, so some individuals who were already 55 in 1966 were excluded from the sample. Thus, of the total 5,020 NLS sample, 3953 respondents who became age 55 in 1966 or later were eligible for the analysis. These persons are followed until age 61, which is prior to a reduced social security entitlement. Among the subjects, death and interview refusal occurred over the survey period, and such persons were excluded from the sample (for details see Table 5.1). Also, respondents who dropped the survey before reaching age 55 were excluded. Finally, 2784 respondents are recorded for the dependent variable and used for the analysis, whether or not they were working at age 55.

Table 5.1 Percentage Distribution of Sample

	Selected sample		Total population	
Group	Percentage		Percentage	
Death	16.1 (635)		12.6	
Refuse	13.5 (534)		10.6	
Completed	70.4 (2784)		55.5	
Excluded			21.3	(1067)
N	3953	NLS	5020	

Many other studies (e.g., Hayward, Hardy, and Liu 1994; Myers 1991) employed a sample selection rule that was conditioned on previous labor force behavior. This study does not adopt such conditional sample selection rules because the study aims to avoid the sample selection bias that is introduced by this procedure. Selecting only individuals who were in the labor force for some specific period prior to the analysis or only subjects who had not exited and reentered the labor force tends to ignore elderly workers with an erratic work history. The absence of sample selection rules in this study is a notable feature of analysis that helps in the examination of the entire pattern of labor force behaviors at later ages, which is the dependent variable.

Locating Age-55 Job

In an attempt to identify respondents' jobs at age 55, respondents who turned 55 in each survey year were selected and included in the work file. That is, if the 55th birthday falls between the previous interview and the current interview date, such individuals are included in a work file for each survey year. These subjects are the target population for identifying the age-55 jobs in the interval between the previous and current interviews. Using available information, I compare the 55th birthday and the holding period of each job, and decide which job is the age-55 jobs.

Determining age-55 jobs in each survey and nonsurvey year is a very complex task because some job changes can occur anytime between the previous interview and the current interview dates. The NLS provides a work history for the period between the last interview and the current interview date which includes the current job (or the last job if the current job is not available) and an intervening job held between the last job and the current job if the respondent changed jobs. Accordingly, the NLS contains a sequence of up to three jobs. However, the problem is that the complete history of employment between the previous and the current surveys is not always provided, but is available in every two surveys. For example, the 1968 survey does not record the same specific work history as the 1967 survey provided, but the 1969 survey recorded the job history. Therefore, it is sometimes difficult to specifically determine when the change happens and what the job is.

Data regarding the start and end dates of employment are very important in identifying the age-55 job; when the data are available, identifying the age-55 job is easy. The current job is selected as an age-55 job if the 55th birth date is greater than the stop date of the intervening job, and the last job is picked if the 55th birth date is less than the start date of the intervening job. Finally, the intervening job is selected as an age-55 job if the 55th birth date falls between the start and stop dates of the intervening job. However, if the current, last (if current job is unavailable), and intervening jobs (if the job changed) are not available or do not provide a full job history between waves, the available date must be used to approximate the age-55 job. In this case, I choose data from the job closest to the 55th birthday. For example, if the start or stop dates of the last and current jobs are not available, but only the date of an intervening job bridging the current and previous jobs in the last interview is available, these data are used for identification of the age-55 job. In nonsurvey years, locating the age-55 job is problematic because no information exists. In this case, I use the next-year survey to identify the age-55 job during the nonsurvey year. The incoming survey provides more extended job information, including a job history for the period since the last interview. Thus, similar rules are adopted for the nonsurvey years.

Dependent Variable

The outcome variable is the type of the late employment exit pattern, including postcareer employment or a second career job. Some individuals who are out of labor force at age 55 are categorized into an occupation category of missing values, so they are included in a category of OLF to

LF (a job whether or not it is same as the previous job) or a category of sporadic work, according to the patterns followed. Here, all transition patterns are recorded by using the three-digit occupation code. A job change is defined by a movement between occupations, using the three-digit occupation code, so that a job change does not necessarily mean a change of employer in this study. Since the segment age of 55 through 61 is selected, it is possible to categorize persons as falling into one of several categories:

(1) no change (still working on age-55 job);
(2) retired from age-55 job and did not return to work before age 62 (retired);
(3) changed jobs with less than one survey year between leaving the age-55 job and the new job (exit and reenter, or job change);
(4) exited work for one survey and then returned to work (OLF to LF); and
(5) worked sporadically after exiting age 55 job (sporadic work).

The first category contains subjects who are still working on the age-55 job when they reach the age of 62. The three-digit occupation code of these individuals remains to be the same until age 61. These persons continue to work on their age-55 job without a job change. The second category includes individuals who leave the age-55 job and retire.

These individuals may or may not receive a private pension, but they engage in no further gainful work. The third category describes individuals who leave the age-55 job and return to another job within a survey interval. That is, these persons are observed to work on their age 55-jobs in the previous survey, but they are observed to work at another job in the current survey. This job change is recorded by using the three-digit occupation code. Thus, this does not mean that these workers change employers. Even if such persons do not change their employers, they belong in this category.

The fourth category includes some individuals who leave the age-55 job, spend one survey out of the labor force, and then return to another job. In other words, these persons are observed not to work in the previous survey (the last and current job information in the previous survey is not available, and their occupations are coded as missing). These individuals in the fourth category of the dependent variable stay out of the labor force after leaving the age-55 job and come back to a new or previous job. This coding of the category includes individuals, who at some point between age 55 and age 61, make a transition out of work for one survey and return to a job, but does not measure if this new job is held until age 61.

The fifth and final category describes erratic work exit behaviors, in which older persons work intermittently.

In every current survey after leaving the age 55 job, these individuals are observed not to work during the week of current survey, but do have a last job between the current interview and the previous interview. These individuals start their work after the previous interview and stop the job at some time prior to the current interview. These older workers repeat the work pattern in the next survey. Most older workers in the category hold more than one different job until age 61.

One difference from older workers in sporadic work is that these individuals in the fourth category are observed to work during the week of every current survey. Since reentering the labor force, the workers in fourth category continue to work until age 61. However, the fifth category persons do not continue their work.

Independent Variables

Choosing a Time to Measure Time-Varying Predictors

The conceptualization of time potentially results in a problem of changing independent variables. The fixed characteristics of individuals do not change (e.g., race and cohort membership), but the time-varying independent variables change over time (e.g., attitude, occupation, wage, and health etc.). Accordingly, the analysis has to resolve the issue. An adequate way, given the structure of this study, to handle changing predictors is to measure all of the independent variables at the same time. Time of measurement should be close to the initiation of the retirement process. The appropriate fixed time of measurement in these data is at age 55, when the study begins observation of respondents.

Predictors

The following variables, which are measured at age 55, are used to predict career endings (for specification, see Table 5.2):

Fixed characteristics

(1) Job characteristics at 55 that measure whether the age-55 job is an internal market, age-structured job: pension eligibility, collective bargaining, union membership, overtime pay provision, and the individual's tenure on the job

(2) Other job characteristics: class of worker (self-employed) and compulsory retirement rules

(3) Individual characteristics: education, race, family structure (number of dependents and number of children) health, marital status, military experience, and attitude toward retirement

(4) Group variable: cohort membership

(5) Labor market variables: social security eligibility, unemployment rate, size of labor market, job status at age 55, and a job in SMSA.

The independent variables are measured at the age-55 job. This assures a clear time ordering with respect to the dependent variables. Thus, the time of measurement for all predictors is fixed.

Finally, the job characteristics of unemployed persons at age 55 are measured at the job that is closest to the age-55 job. In this case, a characteristic of the past job is used for the analysis. The past job is measured prior to the interview at age 55 so that time ordering is assured.

Statistical Model

Censoring Problem

I estimate a multivariate analysis model. Specifically, the multinomial logistic regression is estimated for the outcome variable because each respondent is placed in one of the outcome categories. The study defines away the censoring problem by examining the period from ages 55 through 61. The censoring problem usually occurs in cases where a study ends before a change is observed. The bounded observation period ensures that this does not happen, and allows a "no change before age 62" category. The only censoring arises among

Table 5.2 Definition and Operationalization of Selected Variables

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Individual characteristic variables

Marital status: Marital status of respondents (3=reference group).

1. Married, spouse present
2. Married, spouse absent (widowed, divorced, separated)
3. Never married

Education: Years of education (1=reference group)

1. Less than or equal to high school (12 years)
2. College (13-15 years)
3. More than college (16 years or more)

Health: Does your health limit amount of work? (1=reference group)

0. No
1. Yes

Age: Age is defined as chronological age beginning at 55, the initial point of the process.

Race: White, black and other (2=reference group)

1. White
2. Black and Other

Attitude toward retirement: How do you feel about retirement? (3=reference group)

1. Look forward to it (Look)
2. Bored after retirement (Bored)
3. Other

Attitude toward job: How do you feel about the job you have now?

1. Like it very much
2. Like it fairly well
3. Dislike it somewhat
4. Dislike it very much

Individual experience variable

Military experience: Were you in the military (0=reference group).

0. No
1. Yes

Table 5.2 -- continued

Family structure variables

Dependents: Number of dependents excluding wife.

Children: Total number of children.

SES variables

Assets: Total net family assets.

Income: Total net family income.

Group variables

Cohort: Year of the birth (Old cohort=reference group).
0. Old cohort: People born between 1906-1914.
1. Younger cohort: People born between 1915-1921.

Characteristics of occupation

Class of worker in the age-55 job (1=reference group).
1. Wage and salary job (private and government)
2. Self-employed

Hourly wage rate: Hourly wage in the age-55 job.

Collective bargaining: Are wages on current job set by collective bargaining (0=reference group)?
0. No
1. Yes

Job tenure: Numbers of years worked for the employer of the age-55 job.

Private pension eligibility: Any income expected after retirement from pension where now work (0=reference group)?
0. No
1. Yes

Union membership: Is a respondent a member of union on current job (This variable is based on those who answered a yes to collective bargaining question; 0=reference group)?
0. No
1. Yes

Table 5.2 -- continued

Overtime pay provisions: Do you receive extra pay when you work over a certain number of hours (2=reference group)?
1. Yes
2. No

Labor market variable

Work status at age 55: Do you have a job at age 55 (0=reference group)?
0. No
1. Yes

Social security eligibility: Eligible for social security retirement benefit at retirement age (0=reference group)?
0. No
1. Yes

Unemployment rate: Unemployment rate for labor market of current residence.
1. 0.0 percent to 1.7 percent
2. 1.8 percent to 2.7 percent
3. 2.8 percent to 3.2 percent
4. 3.3 percent to 3.5 percent
5. 3.6 percent to 3.8 percent
6. 3.9 percent to 4.3 percent
7. 4.4 percent to 5.2 percent
8. 5.3 percent to 6.4 percent
9. 6.5 percent to 10.6 percent
10. 10.7 percent +

Size of labor force: Size of labor force in residence area.
1. less than 50,000
2. 50,000 to 199,999
3. 200,000 to 399,999
4. 400,000 to 499,999
5. 500,000 to 799,999
6. 800,000 to 999,999
7. 1,000,000 to 2,999,999
8. 3,000,000 +

Mandatory retirement rule: Is there a compulsory retirement plan (0=reference group)?
0. No
1. Yes

SMSA: Current jobs in SMSA? (0=reference group)
0. No
1. Yes

those who refuse the interview (13.5 percent). Such dropouts need a subsidiary analysis of how they are different from those who remain in the study. In short, this study focuses on ages 55 through 61, so I have emphasized job exit patterns (or no change), not the timing of events. The multinomial approach is appropriate in this case.

Multinomial Logit Model

The multinomial logit technique (conditional logit) is an extended form of the two-category logit model that allows responses to change between two possible outcomes (Hanushek and Jackson 1977). However, the multinomial logit model allows respondents to select among more than two options, which means that this technique is a very popular in the study of labor force participation decisions.

In the multinomial logit (Aldrich and Nelson 1989), one interprets the effect of predictors on the log-odds of one outcome relative to another outcome so that a constant contrast group is chosen in the specification of the dependent variable. Therefore, the odds for selecting an exit pattern (Y=j) relative to the reference group (Y=j'), which is the retired group in this study, is expressed as follows:

$$P(Y=j)/P(Y=j') = \exp(\Sigma b_{jk}X_k) \ / \ \exp(\Sigma b_{j'k}X_k)$$

$$= \exp[\Sigma(b_{jk}-b_{j'k})X_k]$$

where b_{jk} is the vector of estimated coefficients of the jth option and X_k is a vector of independent variables. The reference category of the dependent variable is a constant contrast group, and the parameter for this group is normalized to zero. Thus, the parameter estimates and levels of significance for this category do not exist in the table for the regression results.

In this study, the dependent variable consists of four options which are categorical and discrete, and the outcome of the work exit pattern is treated as discrete, unordered outcome. The generalized logit model (multinomial logit estimate), which includes categorical and continuous predictors, is an appropriate statistical technique for this model. The generalized MNL (mutinomial logit) equation can be expressed by

$$Ln_e\ (P_j/P_{j'}) = a + b_kX_k + e, \ ;\ K=1,\ 2, \ldots n$$

where P_j = a specific exit pattern, $P_{j'}$ = a reference group, being retired,

and X = a vector of independent variables as described below.

For example, P_1/P_5 is the relative odds of choosing continuous working over being retired, P_2/P_5 is the odds of choosing the exiting and reentering pattern over being retired; P_3/P_5 is the odds of choosing OLF to LF over being retired; and P_4/P_5 is the odds of selecting sporadic work over being retired. More formal specifications can be written to compare any pair of exit patterns. In its general form, the equation estimated is

$$\begin{aligned}
Ln_e\ (P_j/P_{j'}) = a &+ b_1\ \text{Education} \\
&+ b_2\ \text{Marital status} \\
&+ b_3\ \text{Race} \\
&+ b_4\ \text{Retirement attitude} \\
&+ b_5\ \text{Numbers of dependents} \\
&+ b_6\ \text{Number of children} \\
&+ b_7\ \text{Military experience} \\
&+ b_8\ \text{Cohort membership} \\
&+ b_9\ \text{Health} \\
&+ b_{10}\ \text{Pension eligibility} \\
&+ b_{11}\ \text{Social security eligibility} \\
&+ b_{12}\ \text{Overtime pay provision} \\
&+ b_{13}\ \text{Collective bargaining} \\
&+ b_{14}\ \text{Job tenure} \\
&+ b_{15}\ \text{Compulsory retirement rule} \\
&+ b_{16}\ \text{Union membership} \\
&+ b_{17}\ \text{Job status at age 55} \\
&+ b_{18}\ \text{Class of worker (Self-employed)} \\
&+ b_{19}\ \text{SMSA (Job in SMSA)} \\
&+ b_{20}\ \text{Size of labor force} \\
&+ b_{21}\ \text{Unemployment rate} \\
&+ e
\end{aligned}$$

where $P_j/P_{j'}$ is the relative odds of selecting one exit pattern over the reference category (being retired), b is the logit coefficient for the independent variables, and e is an error term.

Research Questions

I investigate the patterns of the late career endings and estimate the predictors for this outcome. The independent variables center around the individual characteristics and the age-55 job characteristics, including the labor market situation. In addition to the predictors, I compare two cohorts of old workers on this outcome.

Main Research Question

This study estimates the size of each work exit group. However, the overall analytical focus is on the following issues:

(1) How are those who took new jobs different from those who retired from the age-55 job and those who continued in the age-55 job? This question compares the retirees from the age 55 job with bridge job holders, and current workers. These three groups are assumed to be different in the individual social characteristics. In terms of race, whites are expected to be more likely to follow the third path, still working at the age-55 job pattern, or retire from the age-55 job to leisure. Blacks and other minorities tend to follow a second career or retire from the age-55 job. In general, higher education, being married, having a negative

attitude toward retirement, and being in good health are expected to be associated with working in the age-55 job. Thus, it is hypothesized that these individual characteristics are positively related to working at the age-55 job and negatively to bridge employment and exit from the age-55 job before age 62.

(2) What characteristics of the age-55 job are related to taking bridge jobs or postcareer jobs? Location of the worker in an occupation is likely to be a very important predictor for the transition to a bridge job. The indicators of the age-based (primary) job (i.e., tenure, collective bargaining, union membership, and pension coverage) are hypothesized to be negatively related to the employment change to the bridge job.

(3) What labor market characteristics (i.e., size of labor force, unemployment rate of residence area, and SMSA) are related to the second career job? The labor market situation plays an important role in the early exit pattern. Economic recession pulls some workers out of the career job. The unemployment rate is likely to be related to early withdrawal and the transition to a bridge job. Also, some workers in large labor markets are more likely to leave the age-55 job and take another job because they have more opportunities. More private firms are likely to be concentrated in larger areas. Thus, alternative job availability may affect positively the work exit.

(4) Are adverse labor market conditions conducive to a employment transitions? A high unemployment rate will produce many job-losing workers and increase the number in temporary jobs. Thus, adverse labor market conditions are hypothesized to be associated with sporadic work.

Most of the previous literature has attributed early exit to differences in individual social characteristics and occupational arrangements. Also, the structural perspective emphasizes the push factors of the social organization of work. In this view, the conditions of labor markets are important components of the early work exit pattern. In summary, each individual follows a particular career ending pattern due to the individual's social characteristics, occupational characteristics, and the condition of labor markets.

Cohort Comparison

In this study, I divide the sample into two age cohorts, an older and a younger one. Respondents born between 1906-1914 belong in the older cohort, and individuals born between 1915-1921 fall into the younger cohort. I examine cohort variation in work exit patterns.

First, I compare the cohort groups of older men on work exit patterns. I expect that old cohorts will have more stable late employment patterns. The workers of the older cohort will show the simple late career pattern of exit from the age-55 job to retirement. However, younger cohorts will show more complicated career patterns because the younger cohort will have responded to economic change. Accordingly, it is hypothesized that the younger cohort is more likely to hold a job after the age-55 job.

Second, I examine cohort differences while controlling for the context variables such as military experience, occupational characteristics, pension eligibility, and family configuration to examine if these variables account for cohort differences.

Third, I investigate how individual characteristics mediate the effect of cohort difference on the outcome. Attitudes toward retirement, race, education, marital status, and health may vary by cohort and moderate the cohort effect on late employment patterns. For instance, successive cohorts have historically achieved higher educational levels. Individuals of the younger cohort will, on average, have a higher rate of change in their employment pattern during recent years because of economic changes. As the younger cohorts enter the preretirement stage, their employment patterns become diverse. However, the exit rate of advanced degree workers is low so that the highly educated younger cohort members tend to have stable employment patterns. The cohort parameter alone does not reveal how cohort differences vary because education may suppress the relationship.

CHAPTER 6
RESULTS AND DISCUSSION

Characteristics of Sample

Results of comparisons of work transition groups with respect to means of each independent variable are discussed in this section. First, The dropout and deceased group is examined to see how it is different from the other outcome groups that are observed over the complete research period. Means of the combined dropouts and deceased group are compared to the overall means of the other five outcome groups in terms of individual characteristics and work characteristics. Also, each outcome group is contrasted with a reference group of retirees in similar ways. Table 6.1 and Table 6.2 report a profile for each outcome group and the dropout and deceased group in terms of individual and occupational characteristics.

Dropout and Deceased Group

Characteristics of dropouts (including deceased) are shown in the last column of Table 6.1. Overall means of the outcome groups (excluding the dropout and deceased group) are shown in Table 6.2. In Table 6.1, age 55 characteristics for the dropout and deceased group are not available for those who dropped out or died before age 55. The means for the drop out group are based on a number of observations ranging from 113 to 1169. The education level for dropouts is lower than the overall mean of other outcome groups, but it is higher than for OLF (out of the labor force) to LF (labor force) group and the sporadic work group. Single marital status and being white is more likely for the drop outs, compared to the working at age-55 job group. Health of dropouts is worse than the overall means of other outcome groups, but they are healthier than the sporadic work group. Dropouts are in worse health compared to those who stay in an age-55 job or retire. In short, the individual characteristics for the dropouts are similar to the rest of the sample except for marital status, race, and health.

The dropout group is different from the other outcome groups in some work characteristics. The mean for one variable, job in SMSA, which measures whether the subject's job is located in an SMSA or not, is higher than the means for other outcome groups, which means that these jobs are concentrated largely in urban areas; the size of the labor force is largest among the dropouts, and the unemployment rate is the second largest; the proportion of dropouts with a pension eligibility is similar to most of the other groups; and social security eligibility is as high or higher when compared to other groups. However, tenure spent in an age-55 job is less than average, but the difference is small. Job status at age 55 shows that almost everyone in the dropout group, was working at that point. The level of collective bargaining power is slightly higher than the overall mean of the other five outcome groups but lower than the retiree group and still working group; the proportion with overtime pay provisions is higher than the overall means of other outcome groups and smaller than the OLF to LF group. The level of compulsory retirement regulations for the dropouts is closer to zero, and this means that they are more free to choose their time of retirement than workers in other outcome groups. Also, dropouts have fewer assets and lower incomes than the other groups.

Characteristics of individual and work attributes are discussed, and contrasted with those of other outcome groups in this section. This comparison indicates that dropouts do differ on some variables from the overall means. They are more likely to be single and in poor health, and they have lower incomes and fewer assets.

Outcome Group

This section describes the differences and similarities in individual and work characteristics among the outcome groups are discussed in this section. While

Table 6.1 Means and Percentages of Predictors by Work Transition Pattern for NLS Sample

Predictor		Work exit pattern					
		Working at age-55 job	Job change	OLF to LF	Sporadic work	Retired from age-55 job	Drop-outs
Education		9.9246	9.7768	8.8925	8.4977	9.5057	9.1711
(years)		(3.8252)	(3.8558)	(4.3795)	(4.0962)	(3.7751)	(3.8252)
Marital	MSP	91.1	86.1	84.0	80.4	85.5	80.7
(%)	MSA	5.8	11.1	11.0	14.2	12.1	14.9
	Sng	3.1	2.8	5.0	5.4	2.3	4.4
Race	White	79.2	68.7	63.4	65.2	73.7	68.9
(%)	Other	20.8	31.3	36.6	34.8	26.3	31.1
No. dependents		1.0888	1.0987	0.9797	1.0422	0.9595	0.9467
		(1.4688)	(1.5205)	(1.4140)	(1.5410)	(1.2911)	(1.4688)
No. children		2.8251	2.8045	3.1848	3.1085	2.6781	2.4739
		(2.2868)	(2.3231)	(3.0139)	(2.6814)	(2.3408)	(2.2868)
Health		0.1051	0.1057	0.2051	0.3392	0.1448	0.2809
		(.2809)	(.3076)	(.4064)	(.4742)	(.3531)	(.4505)
Job attitude		1.5326	1.6313	1.7560	1.6734	1.6211	1.7170
		(.6888)	(.7000)	(.7296)	(.7380)	(.7047)	(.6888)
Ret.	Look	66.9	68.1	58.7	77.8	75.4	69.1
Att.	Bored	25.2	21.0	22.7	15.9	18.8	19.8
(%)	Other	7.9	11.0	18.7	6.3	5.8	11.1
Army		0.4611	0.4784	0.4102	0.4930	0.4970	0.4039
		(.4909)	(.4997)	(.4939)	(.5005)	(.5014)	(.4909)

Table 6.1 -- continued

Predictor		Work exit pattern					
		Working at age-55 job	Job change	OLF to LF	Sporadic work	Retired from age-55 job	Drop-outs
SMSA		0.6408 (.4697)	0.6853 (.4645)	0.6170 (.4887)	0.7009 (.4585)	0.7869 (.4106)	0.6959 (.4607)
Size labor market		3.3125 (2.5799)	3.5607 (2.4949)	3.3700 (2.6463)	3.3553 (2.4522)	3.5689 (2.3760)	3.7408 (2.5799)
Unemployment		4.9139 (3.0336)	4.9841 (2.6394)	5.2505 (3.0074)	5.7123 (3.0707)	4.9843 (2.5989)	5.6979 (3.0336)
Pension eligibility		0.6245 (.4818)	0.6252 (.4766)	0.4078 (.5036)	0.6349 (.4686)	0.6381 (.4677)	0.6317 (.4818)
SSE		0.9485 (.2211)	0.9347 (.2470)	0.8691 (.3388)	0.8515 (.3560)	0.8497 (.3583)	0.9485 (.2211)
Tenure		16.32 (10.8622)	13.8069 (11.0533)	10.5464 (11.8180)	13.8990 (11.5736)	17.2409 (10.9517)	13.38 (10.8622)
Job status at age 55		1.000 (.2299)	0.9990 (.2212)	0.7217 (.4501)	0.9433 (.4433)	1.000 (0.0)	0.9440 (.2299)
Bargaining		0.4586 (.4971)	0.3798 (.4855)	0.3188 (.4694)	0.7322 (.4984)	0.4758 (.5011)	0.4384 (.4971)
Overtime pay (%)	Yes	97.1	96.5	97.3	95.4	97.3	97.3
	No	2.9	3.5	2.7	4.6	2.7	2.7
Compulsory retirement		0.3746 (.4890)	0.4473 (.4974)	0.2857 (.4544)	0.4745 (.5003)	0.5065 (.5016)	0.3921 (.4890)

Table 6.1 -- continued

Predictor	Working at age-55 job	Job change	OLF to LF	Sporadic work	Retired from age-55 job	Drop-outs
	Work exit pattern					
Hourly pay	4.1917	4.0176	3.6873	4.2762	4.2954	4.0402
	(2.9646)	(2.4370)	(2.5333)	(2.4481)	(3.6817)	(2.9646)
Asset/1000	33.2500	27.1426	32.8204	30.5179	24.7977	19.9094
	(41.5021)	(60.1000)	(90.1202)	(90.7573)	(40.9753)	(41.5021)
Income/1000	11.9700	12.3583	9.5949	9.7942	11.7042	9.8130
	(7.9557)	(9.0695)	(7.6357)	(8.1016)	(6.9710)	(7.9557)
Cohort Old	46.8	43.2	42.3	32.5	54.3	54.8
(%) Young	53.2	56.8	57.7	67.5	45.7	45.2
Class Wage	76.3	87.4	80.2	86.3	87.4	84.0
(%) Self	23.7	12.6	19.8	13.7	12.6	16.0
Union* member	.9498	.9485	.9047	.9433	.9565	.9026
	(.2187)	(.2212)	(.3007)	(.2321)	(.2054)	(.2977)
N	760	1283	123	443	175	1169

For coding and definition of each variable, see Table 5.2.

*Union membership is based on those whose wages are set through a collective bargaining.

Note: Numbers in parentheses are standard deviations. T-values for interval level are significant at p <.000.

describing detailed characteristics of the sample for the outcome groups, I focus on consistent patterns found among the categories of work exit behaviors. This consistency shows some degree of commonality in individual characteristics that discriminate and sort the work transition patterns. Thus, it is expected that workers possessing good marketability will have more desirable characteristics to deal with job hunting, economic hardship, and periods of unemployment. Table 6.1 reports overall profiles of individual and work structure variables.

The working at age-55 job group is highest in education level among the outcome groups, and is more likely to be married and white. However, two other outcome groups, the OLF to LF group and the sporadic work group, are disproportionately black, disproportionately not-married, and disproportionately low in education. Also, health for the working group and the exiting and reentering group is better than for the other three outcome groups. The still working group has the best attitude toward the current age-55 job, the retiree group has the second-best feeling toward the age-55 job, and the OLF to LF group and the sporadic work group feel more negatively toward their age-55 jobs. With respect to retirement attitudes, individuals in the retiree group have very positive feelings about retirement, but those who come from the working group and the exiting and reentering group think that retirement will be boring.

Table 6.2 Means and Percentages of Selected Variables Derived from NLS Samples

Independent variable		Mean	Standard deviation	Total number
Education (years)		9.5581	3.9551	2768
Marital (%)	MSP	86.5		2343
	MSA	10.2		275
	Sgl	3.3		90
Race (%)	White	71.1		1980
	Other	28.9		804
Number of dependents		1.0741	1.5021	2683
Number of children		2.8672	2.4025	2764
Health		0.1393	0.3463	2354
Job attitude		1.6117	0.6903	2094
Ret. Att. (%)	Look	69.0		1455
	Bored	21.5		454
	Other	9.5		200
Army		0.4742	0.4994	2716
SMSA		0.6783	0.4671	2565
Size of labor force		3.4543	2.4764	2714
Unemployment rate		5.0838	2.7367	2701
Pension eligibility		0.6196	0.4855	2235
SSE		0.9193	0.2722	2667
Tenure		14.6401	11.3938	2568

Table 6.2 -- continued

Independent variable		Mean	Standard deviation	Total number
Job status		0.9406	0.2363	2460
Bargaining		0.4134	0.4925	2109
Overtime pay (%)	Yes	96.6		2042
	No	3.4		72
Compulsory retirement		0.4277	0.4948	2312
Hourly pay		4.1048	2.5889	2064
Asset/1000		29.4412	70.6897	2126
Income/1000		11.7141	8.6099	2221
Cohort (%)	Old	43.1		1201
	Young	56.9		1583
Class (%)	Wage	83.8		2229
	Self	16.2		430
Union* member		.9478	.2224	977

For coding and definition of each variable, see Table 5.2.

*Union member variable is based on those whose wages are set through collective bargaining.

This indicates that workers with negative attitudes toward retirement have a tendency to work later. Finally, the average level of military experience shows that most of the workers in all outcome groups never experienced any military service.

In terms of work characteristics and labor market conditions, each group shows interesting patterns. Unfavorable work characteristics and tight labor market conditions seem to lead to early withdrawal from the age-55 job into nonretirement patterns. Table 6.1 reports these types of exit patterns that are tied to labor market conditions and firm retirement policies.

Labor market state. A low unemployment rate characterizes continuing work and increasing reentry to the labor force as well as being retired, but high unemployment leads to longer absence from the labor force and difficulty in finding a job. Thus, the OLF to LF group and sporadic work groups are higher in unemployment rate, but the working group and exiting and reentering group are low. Most individuals in all five outcome groups have their age-55 jobs in an SMSA. The retiree group and the sporadic group show a higher mean on the SMSA variable, which indicates that early exit and repeated changes are more common in SMSA areas. Each group differs on the size of the labor force; the exiting and reentering group and the retiree group tend to be in larger labor force areas. Perhaps reentry is easier in larger labor markets. Also, the retiree group shows the highest mean of pension eligibility, which indicates a meaningful association between early exit and employer-provided pensions. Most workers in the working group and the exiting and reentering group have pension eligibility, but their level is lower than the retiree group. It is surprising that the sporadic group has such high pension eligibility. Most individuals in all outcome groups have social security eligibility. The working group and the exiting and reentering group have higher levels of social security eligibility, but the other three outcome groups have lower levels of social security eligibility. In short, each outcome group shows different patterns with respect to characteristics of the labor market.

Work attributes. I now describe the characteristics of work for the outcome groups. The occupational arrangements which are produced by firms represent a firm's policy on retirement and employment practices which influence retirement. For example, tenure on the job may represent firm-specific training that affects the chance of finding a new job. Hence, work attributes are an important factor affecting the work exit pattern. The tenure variable shows that the retiree group has the highest tenure, which indicates that longer tenure is associated with early withdrawal. The second longest tenure is in the working group, which indicates that firms tend to hold longer their workers who are highly trained by their investment. The tenure for the exiting and reentry group is higher than that for the OLF to LF group, and this means that some levels of tenure may affect aspects of the reentry process such as job finding. From the tenure distribution, it is easy to see that individuals with long tenure at the age-55 job are more likely to get jobs. Another variable, collective bargaining, measures whether wages of current job at age 55 are set by collective bargaining; the working group and retiree group show a higher level of negotiating power than the exiting and reentering group and OLF to LF group. The OLF to LF group has the highest level (97.3 percent) of overtime pay provisions among all outcome groups, and the exiting and reentering group has the second highest level. Finally, the compulsory retirement variable shows a consistent pattern across the outcome groups, which indicates that early retirement is directly related to the mandatory retirement provision. Hence, the retiree group has the highest level of obligatory retirement rule, but the OLF to LF group, in contrast, shows the lowest level.

In summary, this section has described individual characteristics and work characteristics of the samples in the outcome groups. Comparison and contrast have been used to highlight differences and similarities among the outcomes in terms of descriptive variables. The results indicate that individual work-related and ascribed traits discriminate among work exit patterns in late life.

Early Work Exit Patterns

Two aims of this study are to identify diverse work exit patterns that are not captured by the traditional retirement definition, and to reveal changing retirement patterns, which have been more dynamic and complicated during last two decades. Table 6.3 shows interesting findings on early retirement patterns that are very different from those of previous studies. A large portion of the sample (46.1 percent) leave the age-55 job and take another job soon. They may or may not have left the labor force between jobs.

This estimate is high compared to other studies. For example, using Ruhm's (1990b) estimates of exits from career job between 55 and 60 and assuming that those already out of the career job at 55 have a 50 percent higher exit rate and that the exit rate between ages 60 and 61 is similar to the average yearly rate between 60 and 64, about 47.3 percent will leave their age- 55 job by age 61. Sum and Fogg (1990) use the March 1974 CPS to estimate the one-year rate of change among employed persons in three-digit industry codes. From their analysis, this year appears to have been at the high end of job changing because it was a recession year.

Table 6.3 Percentage Distribution of Work Exit Patterns

Category	Percentage
Still working at age-55 Job	27.3 (760)
Exiting and reentering	46.1 (1283)
OLF to LF	4.4 (123)
Sporadic work	15.9 (443)
Retired from job at age 55	6.3 (175)
N	2784

The yearly rate of 7.8 percent would produce a six-year rate of 46.8 percent, assuming no one changed jobs more than once. In the present study (see Table 6.3), about 71 percent of age-55 workers left their age-55 jobs by age 61. This estimate is not directly comparable to the two cited from the literature because the definitions of job change are so different. In this study, taking a new job could mean staying with the same employer.

Another reason that results are different may be that the NLS cohort is about 10 years younger than Ruhm's Retirement History Study sample. However, the comparison does suggest that this study's estimate is at the high end. This difference in estimates should be examined further.

The second largest pattern is the still working at age-55 job pattern (27.3 percent). Individuals in this category continue to work on the age 55 job until age 61 without a job change. These continuously working people may ultimately retire from the same age 55 job. If I add the retiree group (6.3 percent), the maximum estimate of those who will experience one-step retirement is 33.6 percent. The third most frequent type is the sporadic work pattern, with 15.9 percent of the sample experiencing this work exit pattern. These workers follow an intermittent work pattern. They may not work in the survey weeks, but they have a last job history between the current survey and the previous survey.

The fourth most likely transition to employment is one-step retirement from the age 55 job before age 61, with 6.3 percent of sample making this transition. The least common exit pattern is one in which a worker leaves the labor force for one survey and then returns to a job. This pattern measures, at some time between age 55 and age 61, whether older workers leave the labor force for one survey and return to a job, but does not consider whether the job is kept until age 61.

This section included findings from the study of work transition patterns. Surprisingly enough, results reveal that the prevalence of exiting and reentering the labor force is very large. Thus, the results imply that traditional retirement-- moving from a lifetime job to permanent exit--may have declined.

Work Exit Pattern by Work Status at Origin

Work status at age 55 is included in this analysis, and it measures the origin position of older workers in the labor market. This current study classifies workers into working or notworking at age 55. This "not working" means that the individual has already started a process of exiting and reentering the labor force, and, as such, is distinguished from the workers who are in a job. This status of whether a worker does or does not start the labor force withdrawal process is considered in this analysis because departure from the labor force prior to age 55 may affect subsequent employment activity.

Table 6.4 reports job transition patterns by labor force status at age 55. The majority of not-working individuals at age 55 take on a sporadic work exit pattern, with 77.4 percent following this pathway. Older workers without a job at age 55 are likely to have frequent job changes and have an irregular sequence of employment history. The second most common pattern is one in which workers exit the labor force for one survey and then return to new employment that they keep until age 61. 21.9 percent of non-workers follow this pattern, and this proportion is much higher than that of working individuals at age 55. This indicates that earlier retirees prior to age 55 have a tendency to spend more time out of the labor force or spend more time in looking for a job during the quasiretirement period.

The work transition pattern of employed workers at age 55 shows a different profile. The majority of workers in this labor force status leave their age-55 jobs and return to another job within one year, with 47.5 percent of employed workers at origin making this transition. Those who leave their age-55 jobs before age 62 are likely to remain in or reenter the labor force quickly. About 13.4 percent of individuals follow the sporadic work pattern, and 6.9

Table 6.4 Cross-Classification of Job Transition by Origin and Destination

	Origin	
Destination	Working on job	Not working on job
Still working at age-55 job	28.74	0
Exiting and reentering	47.54	.68[a]
OLF to LF	3.59	21.92
Sporadic work	13.35	77.40
Retired from age-55 job	6.78	0
Chi-square = 546.302* Degree of freedom = 4		
Total Number	2,314	146

*p<.000

[a] One person falls in this category, probably resulting from a coding error.

Note: Labor force status at origin is measured at age 55.

percent retire in one step from the age-55 job. Finally, 3.6 percent of those working at age 55 exit the age-55 job, spend one survey out of the labor force and return to the labor force.

These results obtained from the analysis show that work exit patterns differ according to the labor force status of origin. That is, work status at age 55 is important in predicting subsequent work exit behavior.

Age and Pattern of Work Exit Behavior

Figure 6.1 shows the age pattern of early work exit behaviors. A general pattern is that transitions peak at age 57 or age 61. A notable feature is that most of the retirees make their decisions at age 61, shortly before the reduced social security eligibility age. At age 57, many employment transitions also occur; 28.6 percent of persons in the exit and reenter pattern make their job change, 23.68 percent of older workers in the OLF to LF pattern, 19.36 percent of the sporadic work exit pattern, and 1.53 percent of retirees make their transitions at this age. Among the exit patterns, the individuals in the exit pattern, exit and reenter, mark their highest level of transition at age 57, which means that they leave their age-55 job at this point and take another job. Overall, most of the work transitions occur between age 56 and age 59.

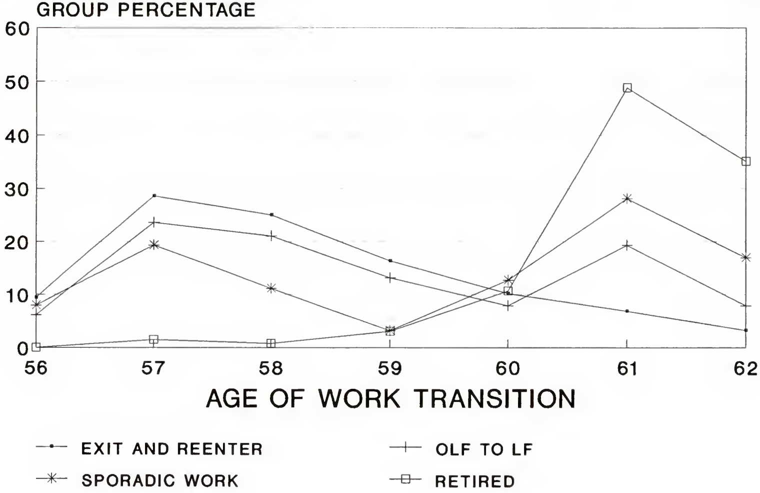

FIGURE 6.1 WORK TRANSITION BY FIRST AGE
Note: This is based on N=1912 (NLS) who made transitions.

The mean of the first transition age is, overall, 58.70, but mean age of each outcome group is different. The mean age of the exit and reenter (job change) transition is 58.22, so it is below the overall mean and lowest among all exit patterns. However, the first transition age of retirees, shows the highest level of mean age, 61.10. The second youngest age is for persons in the OLF to LF exit pattern, whose mean age is 58.79, and individuals who follow the sporadic work exit pattern show a first transition mean age of 59.44. In short, a typical exit and reenter transition occurs at the young age of 57, relative to other work transition patterns, but retirees make most transitions at the older age of 61.

Multivariate Analysis of Work Exit Behavior

This section includes the results of a causal analysis of early retirement and discusses the effects of covariates. A causal interpretation of the effects of independent variables is an advantage of this study because this research uses panel data. From a cross-sectional design, it is difficult to infer a causal effect without a strong theory. However, in a panel design, it is possible to control the time of measuring independent variables. Thus, the current analysis reasonably provides the causal effect of independent variables.

The results drawn from the analysis generally support an argument that early retirement is strongly driven by the labor market conditions and the structure of occupations. As long as they work, older workers are connected to work organizations so that they are responsive to their labor unions and firms; this kind of work environment, as a given structure, strongly affects work exit behaviors of older workers.

Table 6.6 and Table 6.7 represent, respectively, equation one and equation two of the work exit behavior model. Individual characteristics and pension eligibility enter equation one; the reason for pension being entered prior to labor market variables is to see a change in the pension effect when I control for a set of labor market variables. However, equation two aims to test the effect of labor market variables and occupational structure variables and to see how these variables account for the pension-early retirement relationship. Here, the likelihood ratio chi square is used for pseudo-model fit, which shows that controlling labor market and occupational structure variables increases the model fit from 4285 to 5794. However, this study emphasizes more estimating effects of the work sphere on early retirement than a general model of early work exit behavior.

In this multinomial analysis, the dummy variables were coded one for presence of a characteristic and zero for its absence or lack of information. In other words, the missing category was combined with the zero category. For union membership this was a reasonable procedure because the missing consisted of persons who were not covered by collective bargaining (and therefore very unlikely to be in a union). For other variables, such as pension, this procedure involves an assumption: in the case of pension, for example, it assumes that those who did not provide information are similar to those who did not have a pension. To the extent this assumption is incorrect, coefficients will be biased toward zero. In other words, chances of a significant finding are reduced.

Effects of Workers' Characteristics and Pension Eligibility

Attitude toward retirement appears to make a difference in labor force exit behaviors. A negative attitude toward retirement (bored) that one will feel bored after retirement (compared to an other response) shows a significant influence on sporadic work. Those who expect to feel bored at their retirement are more likely to retire than to follow the sporadic work pattern. The workers with a negative attitude are more likely to work without a job change than to retire, and to exit the age-55 job and reenter instead of retiring. However, these relationships are not significant. Also, with respect to a transition to OLF to LF versus being retired, those workers who expect to be bored by retirement are more likely to retire, but this association is not significant either. These results indicate that even still-working older men who expect to feel bored at their retirement tend to avoid job transitions, OLF to LF, and sporadic work because these people work continuously. The finding for sporadic work versus retired is unexpected. One possible reason is that bored is contrasted with an other response and it is not clear what other means.

Another attitude variable measuring a positive feeling toward retirement (look forward to retirement compared to other response) shows the expected direction of sign in the relationship. Older workers who have a positive attitude, saying they are looking forward to their retirement, prefer being retired to working at the age-55 job, exiting and reentering, OLF to LF, and sporadic work. Workers who are positive toward their retirement are more likely to retire than follow the other options. Especially, the relationship with a transition to OLF to LF and sporadic work are significant, which indicates workers positive toward retirement tend to retire instead of the alternatives of OLF to LF and sporadic work.

The health variable measuring good health reveals the strongest relationship with work exit patterns among the individual characteristics. The result from the health effect on job exit behaviors supports previous studies.

Older workers in a good health condition are more likely to keep working at their age-55 job and to reenter the labor force after exiting initially, and these two relationships are very significant. Also, health has a significant influence on a transition to the sporadic work exit pattern, and this effect indicates that healthy individuals do not favor the sporadic work. The sporadic work pattern is potentially linked to older workers who have a chronic disease. In respect to a movement to OLF to LF versus being retired, the negative sign of direction for the regression coefficient reveals that healthy workers are more likely to avoid the exit pattern of OLF to LF. This effect is not significant. In terms of transition to OLF to LF and sporadic work, the effects of retirement attitude variables and health variables show a consistent pattern, which indicates these two exit alternatives are potentially related to an erratic work history and health-related coping behaviors of elderly workers.

The effect of employer-provided pension eligibility reveals that pension eligibility plays an important role in work transitions that occur between age 55 and age 61. Pension eligibility generally discourages the work patterns, OLF to LF and sporadic work, compared to early retirement. This effect suggests that older workers who carry a private pension are more likely to accumulate more retirement pension wealth than other nonpension workers, and so they are unlikely to work on a marginal type of job during the retirement period.

Cohort Membership and Work Exit Behavior

The effect of being in the younger cohort on work exit behaviors shows a consistent and strong association between the two variables and confirms a belief that younger generations are more active in postretirement employment activity. Younger cohort members are more likely to continue their work on age-55 jobs and they also are likely to follow each of the other patterns than to retire. The cohort effects indicate work patterns are becoming more diverse.

Labor Market Versus Worker Characteristics

Table 6.7 adds labor market and occupational structure variables to the equation. The labor market variables and occupational structure variables account for much of the relationship between early retirement and worker characteristics variables found in Table 6.6. This finding suggests that the work sphere variables substantially explain more variation in early work exit behaviors. For example, attitude toward retirement significantly explains the work exit behaviors, but after controlling for work sphere variables, the significant relationship disappears.

Table 6.6 Parameter Estimation of Multinomial Logit for Regression of Early Work Exit Pattern on Worker Characteristics and Pension Eligibility Variables: NLS Sample

Independent variable	Contrast			
	Working at age-55 job	Exit and reenter	OLF to LF	Sporadic work
Intercept	1.1055* (.5971)	1.9148*** (.5756)	.9094 (.7471)	2.3322**** (.6053)
College[a]	.1783 (.3626)	.4621 (.3473)	-.1243 (.6166)	.1519 (.4075)
More than college	.2465 (.3328)	.1972 (.3236)	.4876 (.4923)	.0682 (.3859)
Married spouse present[b]	-.2245 (.5653)	-.2359 (.5479)	-.7202 (.7100)	-.8814 (.5774)
Married spouse absent	-.9780 (.6170)	-.4137 (.5882)	-1.2029 (.8028)	-.8499 (.6247)
Whites[c]	.2659 (.2068)	-.2778 (.1942)	-.3533 (.2971)	-.3076 (.2201)
Bored[d]	.2301 (.2744)	.0088 (.2663)	-.3486 (.3895)	-1.1481**** (.3169)
Look	-.1848 (.2124)	-.2371 (.2036)	-.7506** (.3058)	-.7908**** (.2258)
No. children	-.0025 (.0491)	-.0073 (.0469)	.0757 (.0679)	.0689 (.0518)
No. dependents	.0639 (.0772)	.0533 (.0743)	-.0972 (.1153)	-.0565 (.0845)
Military	-.2810 (.1860)	-.2085 (.1783)	-.2090 (.2806)	-.0870 (.2037)
Good health[e]	.5351*** (.1994)	.4972*** (.1891)	-.3648 (.2777)	-1.0463***** (.2056)
Young[f]	.4320**	.5292***	.8545***	1.3672*****
Pension eligibility	-.1712 (.1825)	.0405 (.1753)	-.8506*** (.2935)	-.3904** (.2032)

Table 6.6 -- continued

Independent variable	Contrast Working at age 55 job	Exit and reenter	OLF to LF	Sporadic work
Overtime pay provision	_	_	_	_
Compulsory retirement	_	_	_	_
Bargain	_	_	_	_
Self-employed	_	_	_	_
Tenure year	_	_	_	_
Work status at age 55	_	_	_	_
Union member	_	_	_	_
SSE	_	_	_	_
Size of labor force	_	_	_	_
Unemployment rate	_	_	_	_
SMSA	_	_	_	_
Total N		2511		
Likelihood ratio		4285		

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*p <.10 **p <.05 ***p <.01 ****p <.001 *****p <.000 (two-tailed tests)
For [a b c d e f], see operationalization in Table 5.2.
Note: Numbers in parentheses are standard errors.
A work exit pattern, retiree category has been normalized to zero.

Also, the health variable loses part of its effect on sporadic work; the size of the regression coefficient is reduced, even if a statistical significance is maintained. Thus, these examples indicate that the work characteristics variables including the labor market conditions and occupational structures are important in explaining the effect of the worker characteristics on early work exit patterns.

Other remaining variables in the equation of individual characteristics variables show different results after introducing work sphere variables; pension eligibility becomes significant in explaining why workers continue to work at age-55 jobs and exiting and reentering, but loses its significant effect on transition to the OLF to LF pattern and sporadic work exit pattern. After controlling the work sphere variables, the pension variable shows a significant influence on a transition to working at the age-55 job and exiting and reentering the work force. This indicates that a pension encourages working at age 55 job and a reentrance to the labor force, in collaboration with the labor market variables.

Another variable, younger cohort membership, generally becomes stronger with the introduction of work sphere variables. This indicates that the labor market variables and occupational structure variables suppress cohort effects.

Table 6.7 Parameter Estimation of Multinomial Logit for Regression of Early Work Exit Pattern on Occupational Characteristics and Labor Market Variables: NLS Sample

	Contrast			
Independent variable	Working at age 55 job	Exit and reenter	OLF to LF	Sporadic work
Intercept	.6325 (.8305)	2.1601*** (.7952)	2.2336*** (1.0565)	2.8492* (.8813)
College	.2699 (.3843)	.5225 (.3686)	.0208 (.6353)	.1565 (.4366)
More than college	.4177 (.3482)	.1801 (.3379)	.2517 (.5585)	.0099 (.4038)
Married spouse present	-.2080 (.5756)	-.1303 (.5582)	-.6274 (.7376)	-.1426 (.6387)
Married spouse absent	-.8730 (.6350)	-.2832 (.6062)	-1.2809 (.8518)	-.2744 (.6968)
Whites	.0997 (.2181)	-.3489* (.2057)	-.0968 (.3370)	-.1217 (.2435)
Bored	.3168 (.2840)	.0535 (.2763)	.0958 (.4152)	-.4946 (.3361)
Look	.0435 (.2238)	.0064 (.2149)	-.1934 (.3387)	-.1622 (.2525)
No. children	-.0039 (.0523)	-.0129 (.0501)	.1106 (.0750)	.0696 (.0572)
No. dependents	.0374 (.0806)	.0353 (.0777)	-.1246 (.1232)	-.0578 (.0911)
Military	-.1965 (.1921)	-.1957 (.1844)	-.1301 (.3003)	-.1240 (.2189)
Good health	.5294*** (.2058)	.4987** (.1961)	-.0633 (.3064)	-.6584*** (.2215)
Young	.5010** (.2028)	.6839**** (.1948)	.6562***** (.3542)	1.8536***** (.2533)
Pension eligibility	.4675* (.2412)	.4246* (.2311)	-.4567 (.3937)	-.1179 (.2796)

Table 6.7 -- continued

Independent variable	Contrast			
	Working at age-55 job	Exit and reenter	OLF to LF	Sporadic work
Overtime pay provision	-.0995	-.1368	-.1414	-.6789*
	(.3837)	(.3699)	(.5171)	(.4018)
Compulsory retirement	-.5498**	-.1449	-.1736	-.0162
	(.2247)	(.2153)	(.3870)	(.2614)
Bargain	.8113	.4251	1.4308	.6838
	(.7779)	(.7597)	(.9664)	(.8667)
Self-employed	.6048	-.0239	-.0114	-.7921*
	(.4221)	(.4123)	(.5594)	(.4561)
Tenure year	-.0086	-.0230***	-.0433***	-.0179*
	(.0083)	(.0089)	(.0137)	(.0096)
Work status at age 55	-.3317	-.5723**	-2.3677*****	-1.4616*****
	(.2983)	(.2862)	(.3985)	(.3330)
Union member	-.8332	-.7960	-1.7733*	-.8010
	(.7785)	(.7605)	(.9845)	(.8679)
SSE	1.0943****	.9010****	-.1146	-.4190
	(.2905)	(.2634)	(.4138)	(.2840)
Size of labor force	.0516	.0820**	.1412**	.1029**
	(.0445)	(.0425)	(.0698)	(.0507)
Unemployment rate	-.0046	-.0301	-.0042	.0289
	(.0346)	(.0334)	(.0522)	(.0381)
SMSA	-.6732***	-.6897***	-.9080**	-.8197***
	(.2509)	(.2425)	(.3796)	(.2827)
Total N			2511	
Likelihood ratio			5794	

*p <.10 **p <.05 ***p <.01 ****p <.001 *****p <.000 (two-tailed tests)

Note: Numbers in parentheses are standard errors. Retiree group has been normalized to zero.

Influence of the Work Sphere

The influence of the work sphere, including labor market and occupational structure variables, on the early work exit behaviors are shown in Table 6.7. These results strongly support an argument that the labor market structures are stronger than worker's trait variables in affecting work exit behaviors, which indicates a structural feature of work at age 55 is strongly linked to the labor force dynamic over the next six years. The addition of work sphere variables into the equation increases the model fit, which indicates that these variables are important in accounting for early work exit behaviors. Thus, these results suggest that the work domain is a promising area for explaining early work exit behaviors.

Overtime pay provision. An overtime pay provision discourages older workers from further participation in the labor force, but it is significant only for the transition to sporadic work versus being retired. Overtime pay provisions are associated with labor unions. In a sense, the result indicates that labor unions may push older workers to leave jobs early.

Compulsory retirement. A compulsory retirement rule is a job-specific kind of regulation, so it captures the direct effects of an occupational structure. An effect of obligatory retirement is greatest in a transition to retirement relative to working at an age-55 job, in which the impact of the rule is significant. It is negative but not significant for other transitions. This finding indicates that being subject to compulsory retirement is a factor leading to early retirement and remaining out of the labor force. In short, job-related compulsory retirement consistently produces early withdrawal, which indicates that the early retirement decision is a result of an occupational arrangement.

Collective bargaining. A collective bargaining variable measures if a wage is set through collective bargaining between firms and unions, so this variable represents an effect of labor unions on early exit behaviors. The current result shows that collective bargaining has a nonsignificant effect, but this result is not reliable because there is a multicolinearity between a bargain variable and a union membership variable, in which both variables measure union membership and the influence of labor unions. The reason for this is that the union variable is coded one if the respondent is a union member and covered by collective bargaining. Almost all of those covered by collective bargaining are union members. In bivariate analysis, the Pearson correlation coefficient is .9553 between the two variables.

Self-employment. The self-employed are more likely to retire than to follow sporadic work. Other effects are not significant. The overall pattern suggests that the self-employed elderly are more likely to remain at their age-55 job between age 55 and age 61. The self-employed have a tendency to remain in their age-55 jobs and to stay out of the labor force during their retirement period. This suggests that the nature of work makes a difference in work exit behaviors.

Tenure. A result of tenure shows that higher tenure tends to push older workers to leave their age-55 job early. Older workers with higher tenure tend to retire early relative to other alternatives, working at age-55 job, exit and reenter, OLF to LF, and sporadic work. All outcomes except working at age 55 job are significant. The general findings indicate that firm-specific job training tends to hold older workers at their age 55 job, and is likely to reduce further labor force participation.

Work status at age 55. Work status at age 55 captures older workers' positions in the labor market at origin, and older workers who have jobs at that time are coded one. Working at age 55 leads to retirement rather than the other patterns. All but the working at age-55 job are significant. With respect to a transition to exit and reenter versus being retired, the effect of work status at age 55 is significant, and this indicates that a position in labor market discourages further participation in the labor force. With respect to a transition to OLF to LF versus being retired, elderly workers who have a job at age 55 are more likely to avoid the OLF to LF alternative and retire, which indicates that the workers having their jobs at age 55 make their transition without multiple job changes. Also, job holders at age 55 are unlikely to follow the sporadic work exit pattern. In summary, an effect of job status at age 55 shows that a location in the labor market at age 55 induces older workers to leave their jobs early and tends to discourage their reentrance to the labor force.

Union membership. The union membership variable represents a labor union role in the labor market. The union membership variable reveals a consistent negative pattern, so union membership encourages older workers to choose early retirement over other options. Only the OLF to LF pattern is significant. Thus, workers with membership are more likely to avoid marginal types of work exit behaviors. In short, the influence of union membership on early work exit patterns suggests that a labor union is more likely to push older workers to leave early, perhaps because of stagnant industrial employment. It must be remembered that union membership is highly correlated with collective bargaining.

Social security eligibility. Workers who have social security eligibility are more likely to work at their age-55 jobs relative to early retirement, and to exit and reenter. Among social-security-eligible persons, quitting their age-55 jobs early will sacrifice their amount of social security wealth. As a result, workers who have the social security eligibility (SSE) are more likely to remain in or reenter the labor force because they try to increase their social security wealth. This result comes from an age provision that counts average earnings until age 62 to determine benefits. Also, this result suggests that government, an actor of the labor market, encourages workers to remain working through social security rules. Thus, state or government plays an important role in making the late work exit pattern more complex and dynamic.

Size of labor force. Labor market size is significantly related to the early retirement process, which may indicate that a size of the labor force is related to an availability of post-career jobs. This suggests that job finding is easier in a larger labor force area. The statistical results reveal that workers in a larger labor force are more likely to reenter the labor force after exiting their age-55 jobs. However, the size of the labor force does not affect a transition to working at an age-55 job versus being retired. Especially, the size of the labor force is more important to a couple of work exit patterns, "OLF to LF" and "sporadic work" because job availability is essential to individuals who follow the sporadic work transition pattern and the OLF to LF pattern. These results show that the size of the labor market is also a factor that promotes more employment activity during a quasiretirement era.

Unemployment rate. An unemployment rate does not show a significant association with any of the early work exit patterns in the current study; however, all but sporadic work have negative signs, indicating that older workers are likely to retire where there is a high unemployment rate.

SMSA. The SMSA variable measures whether the age-55 job is located in the SMSA area, and the influence of SMSA shows a significant and consistent impact on early work exit behaviors. The SMSA variable is observed to promote early retirement relative to four other transition alternatives. This indicates that the location of the age-55 job in an SMSA influences early work exit patterns and suggests that jobs in an urban location are more highly routinized and rationalized relative to some jobs in rural areas, including farming.

These results show that a complex labor force activity is closely tied to the labor market and work organization. Corporate actors in the labor market, firms, labor unions, the government (or the state), and older workers themselves work together to shape the massive dynamics of early work exit behaviors, in which occupational structures modify individual exit behaviors along dimensions of work attributes. Among the actors, firms are very dominant in shaping elderly work exit behaviors by way of tenure, mandatory retirement, and pension benefits. The government makes this behavior more dynamic by promoting continued work before age 62 through rules of social security. All this suggests that elderly work exit behaviors are caused by an interplay between the labor force actors. Also, work exit behaviors are influenced by a structural barrier of the labor market such as the size of the labor force and the location of jobs in SMSA.

CHAPTER 7
CONCLUSION

I argue that structural features of labor market and occupation are important factors in early work exit behaviors. In order to examine this assumption, labor force exit behaviors between age 55 and age 61 have been investigated in terms of characteristics describing actors in the labor market and occupational arrangements. All covariates are measured at age 55, and five types of early work exit patterns are identified, which allows direct causal inference. A major advantage of this emphasis on the dynamic aspect of exit behaviors and fixed measurement of covariates is that this permits an assessment of the structural components of older men's work exit behaviors based on their age-55 jobs. Also, it allows an investigator to estimate an effect of the work sphere on early work exit behaviors.

This analysis indicates that characteristics of labor markets and work attributes as well as individual characteristics have a significant effect on the early retirement process including reentering and exiting out of the labor force, and permanent exit. Labor market actors, firms, unions, and the government (or the state)

significantly influence early employment exit behaviors. In this analysis, union membership, an overtime pay provision, and collective bargaining represent labor unions; tenure and employer-provided pension eligibility represent firms; and social security eligibility represents the government (or state). Firm and labor union effects
tend to induce older workers to leave their jobs early and discourage them from reentering the labor force. Interestingly, employer-provided pension effects are reduced by adding occupational characteristics to the equation. Government does reduce pre-62 exit through social security. Occupational structures also are significantly associated with early departure from a job; compulsory retirement rules and self-employment are significant in affecting work exit behaviors. Work status at age 55 increases early departure from jobs. Compulsory retirement increases early retirement, and self-employment reduces sporadic work.

Also, structural characteristics of the labor market are significant determinants of early work exit behaviors; size of the labor force and location of jobs in an SMSA significantly affect work exit behaviors. A larger size of the labor force encourages more postretirement work activity. Also, the location of a job in SMSA increases early retirement.

These results provide direct support for the argument provided by the labor market perspective that early retirement and early work exit behaviors are driven by corporate actors, firms, labor unions, older workers themselves, governments, and structural features of labor markets. Interestingly, the government plays an active role in encouraging reentry after exiting initially, mostly through social security rules. Another noteworthy finding is that an employer-provided pension shows an ambivalent influence on work exit behaviors, in which a pension encourages early exit as well as reentry. One interpretation of the private pension effect (Table 6.7) is that favorable attributes of the work structure are more likely to hold older workers at their age-55 jobs. Thus, all these findings indicate that the labor market perspective is useful in understanding early work exit behaviors.

Implication for Life Course Perspective

Evidence from the analysis supports the idea that standardization of the life course affects a specific portion of the population. This limited life course institutionalization holds true for older workers who work at their age-55 job until age 61. As Table 6.1 shows, this group of individuals has more education, is white, and is healthier. These persons are more likely to carry a private pension and social security benefits. Tripartition of the life course--education, work, and retirement--is probably maintained for them, and their work careers in the labor organizations are more likely to be highly age structured. As a result, they do not prematurely exit or follow complex work patterns before age 62.

Other older workers show very diverse work exit patterns after leaving their age-55 jobs. These early retirees quit their age-55 job at sometime between ages 55 and 61. During this period, these early retirees combine retirement and work, that is, they reenter the labor force and then at some time get out of labor force. Thus, their work life is highly flexible and transient until final retirement. These early retirees are more likely to not have a college education, to be nonwhite, and to be less healthy. These persons have a more lengthy retirement period, and their work period is shorter. As a result, their work life is very heterogeneous. A work exit pattern for this group of individuals is more diverse and dynamic in movement, which means that such early retirees at least hold one additional job. For these individuals, the life course is not as orderly. The tripartition of life into education, work, and retirement assumes clear transitions between stages. This is no longer true of the work-retirement transition for many workers.

As a result, the boundary between work and retirement for these early retirees becomes fuzzier and less clear-cut. As the individual level analyses in this study show, older workers who leave early their age-55 jobs do combine work and retirement during a quasiretirement period. The variability in the timing of the transition to retirement has increased, and so the timing of retirement is likely to be more individualized and unpredictable. Also, a tripartition of the life course begins to come apart, which indicates that orderly and continuous trajectories of successive stages become missing in late work life. The end of work life becomes variable and no longer follows a normative scheduling. The meaning of the last stage in the life course for this portion of the population becomes blurred. Thus, these results of the study indicate that early work exit patterns have undermined the tripartition of the life course.

Implication for Sociology of Age

The sociology of age examines how age structures employment. The pattern of complex employment sequences identified by this study suggests that many workers finish their work life in post-career jobs which are likely to lack age-based characteristics such as seniority and pensions.

However, age-structuring of work is highly valid for older workers who are still working at their age-55 jobs. In the process, age organizes their reward system, timing of retirement, and seniority system even in late work life.

However, the marginal type of employment, which many early retirees take, may indicate a loss of this kind of age grading in the work organizations.

Overall, the findings indicate that age structuring in late life begins to occur differentially in two ways; for some, age grading is maintained and intensified by work rules, but for others, age grading is replaced by functional age, so age structuring loses its regulation of employment activity. Thus, the late work life is becoming variable, disorderly, and imprecise, and further is characterized by greater stress on functional criteria which are based on an individual's capabilities and effectiveness. This changing age grading in employment is linked to characteristics of jobs at age 55. Firm pensions tie older workers to the social organization of work and hold them longer at their jobs. Also, long-term tenure reduces job change and keeps the elderly in the firms. Such characteristics of work at age 55 are likely to maintain high age structuring of work arrangements.

In other words, age structuring (or age grading) in work arrangements is high in jobs with features related with primary sector employment, but low in the jobs with characteristics associated with secondary sector employment. Occupations that are highly age structured are likely to be in primary sector employment in which most workers engage in their age-55 jobs until final retirement, and a job exit rate is very low. In summary, age grading after age 55 is likely to be differentiated according to whether or not the characteristics of age 55 jobs are associated with a primary sector employment.

This study earlier raised specific research questions to examine a link between early work exit behaviors and labor markets. The results are briefly summarized here. First, individual characteristics discriminate the job ending pattern. Early retirees are likely to have unfavorable individual traits, but currently working individuals have desirable characteristics, such as higher education and better health. Second, characteristics of the age-55 job are related to postcareer employment activities. Employer-provided pensions significantly increase the probability of working at age-55 jobs from ages 55 through 61, but compulsory retirement rules encourage early exits from the age-55 job. Third, labor market characteristics (objective situations of the labor market) have an influence on the work exit pattern. A larger labor market significantly increases reentry into the labor force, and the location of the age-55 job in a SMSA discourages working at the same job from ages 55 through 61. Finally, adverse labor market conditions seem to influence an employment transition.

This research began with a concern for explaining the recent increasing diversity of work exit patterns. The research uses labor market and occupational structure perspectives. These approaches argue that many previous perspectives tend to overlook influences of the work sphere. The results of the study suggest that these perspectives on the labor market and work organization are useful in explaining exit behaviors, and are more important in influencing early retirement than worker's characteristics variables. Thus, this indicates that the work domain is a promising area for retirement research.

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BIOGRAPHICAL SKETCH

Hyunkee Lee was born in Hapduck, Dangjin, South Korea, and was educated in Seoul. He has two brothers and two sisters still living in South Korea. He received his Bachelor of Arts degree in sociology from Sung Kyun Kwan University in Seoul, a Master of Arts in sociology from the University of Florida, and the degree of Doctor of Philosophy in sociology from the University of Florida. His research areas include aging studies, methodology, and criminology. Currently he is an instructor of sociology at Sung Kyun Kwan University in Seoul, South Korea.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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